# THE GREAT PYRAMID
## AND
# GREAT BRITAIN.

BY

H. DE ST. DALMAS.

WITH DIAGRAMS AND ILLUSTRATIONS.

*FOURTH EDITION*
OF
*"The Great Pyramid Inside and Outside."*

LONDON:
ROBERT BANKS & SON,
RACQUET COURT, FLEET STREET, E.C.

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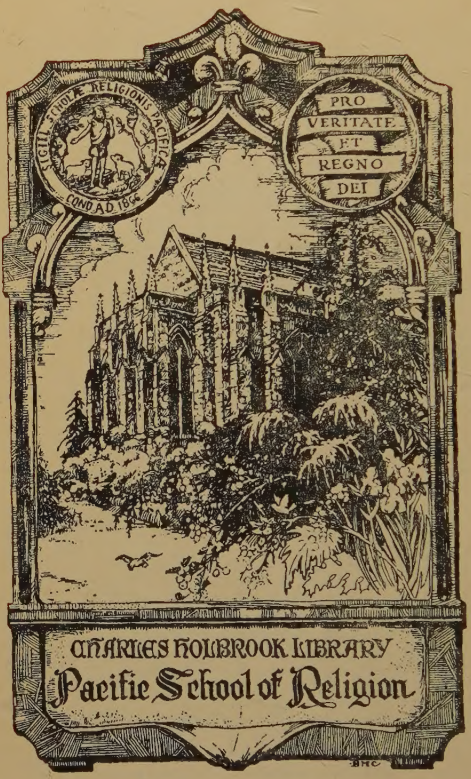
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H. DE ST. DALMACE.

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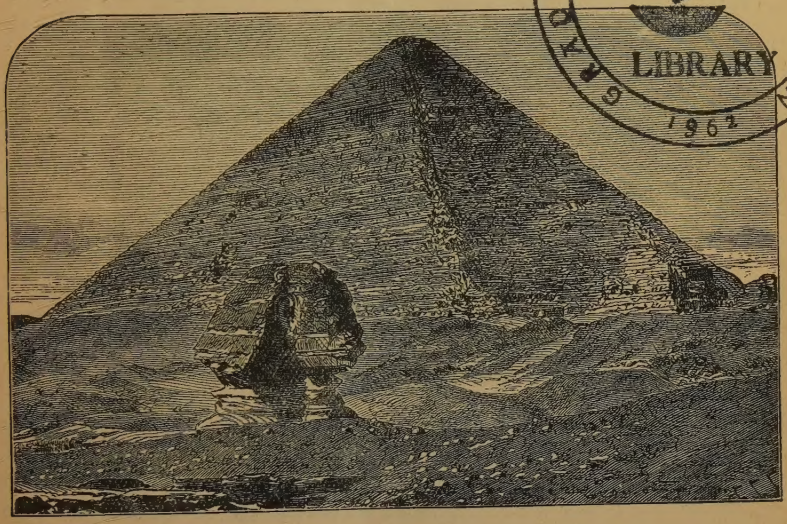

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## PREFACE TO FOURTH EDITION.

"THEY may laugh, but they believe it all the same," was the comment of a military officer, on one of the many occasions, when passing through the Suez Canal on the voyage to, or from, India, I had, with the captain's permission, hung up my chart of the Great Pyramid, and given an hour's talk on its sacred and scientific teaching to a group of interested passengers.

Never, on any occasion, in reply to my invitation, or challenge, has anyone attempted to disprove the Pyramid measurements of Professor Piazzi-Smyth; or, accepting the measurements as correct, attempted to give any rational explanation of them in refutation to what was presented in the lecture.

"The Great Pyramid Inside and Outside" was published first in India about thirty years ago; the third edition, published in London, is now nearly exhausted; so the call has come to send forth this little book in the time of this greatest of all wars, which seems to be preparing the way for the yet greater events of which the Pyramid's time-measurement passages apparently indicate the approach.

Egypt having become a British Protectorate, our national interest in that ancient land, and in this ancient and most wonderful monument, should be greater than ever before.

I have ventured to alter the title, and to couple Great Britain with the Great Pyramid. If what is written in this book is true, then the Anglo-Saxon race on both sides of the Atlantic has a heritage it should seek to live up to. Let us never abandon the measures handed down from our ancestors, and recorded in this monument of antiquity.

The Great Pyramid has a message for the world and for the individual; for the man in the street as well as for the philosopher. If the first and oldest building is the most perfect ever erected, then "primitive man" was neither a savage nor an ape.

If the geometric proportions, and the astronomic correspondences are universally acknowledged, then most surely the Bible correspondences are as certain as the scientific. Here, then, in the Great Pyramid's witness to man's destiny is to be found its long-hidden and most precious treasure, which we should seek with all diligence.

Redland, Bristol, July, 1915.

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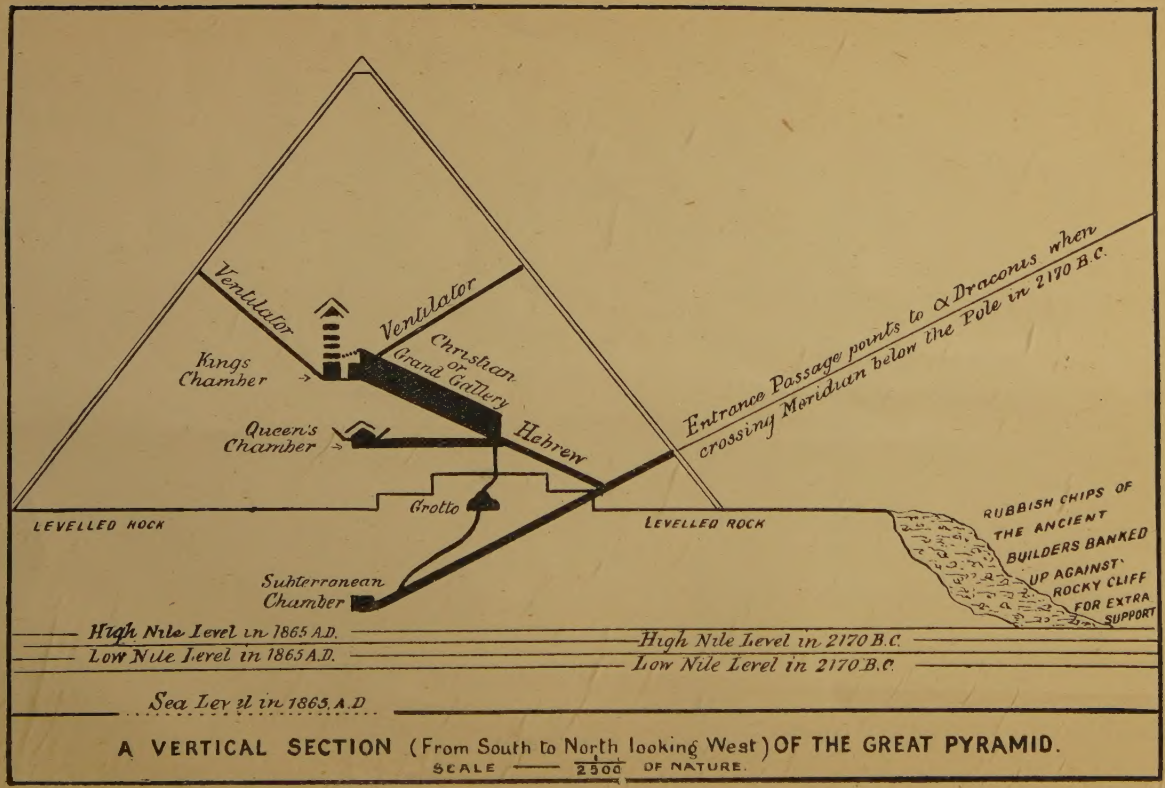
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SCALE —— $\frac{1}{2500}$ OF NATURE.

# THE GREAT PYRAMID

AND

# GREAT BRITAIN.

## CHAPTER I.

### Introductory—Personal Interest.

About forty years ago my interest in the Great Pyramid was first aroused. Passing through Agra to my mission station in Rajputana I heard that an English clergyman was visiting India for the purpose of lecturing to English-speaking Indians on the wonders of the Great Pyramid. This had nothing to do with its being one of the Seven Wonders of the World in the days of old, but was of a different nature altogether. If what the Rev. F. R. A. Glover stated in his lecture was true, then the Great Pyramid was built by Divine direction, according to a pattern, plan, and measure revealed by God's Spirit to the builder—like the Ark of Noah, and the Tabernacle of Moses.

Mr. Glover's object in visiting India and lecturing in its principal cities, I was told, was to attract the attention of educated Indians to the study of the Bible by demonstrating the correspondence of the teachings of the Great Pyramid with the truths of Revelation.

The outstanding impressions which remained with me were that the base measurements of the Great Pyramid showed the true length of the solar year—each side being exactly $365\frac{1}{4}$ cubits; and that there were passages or galleries inside the Pyramid which corresponded with periods of Bible chronology, on the scale of an inch to a year. Also, and most startling of all, the end of the Grand Gallery was supposed to indicate the period of the Second Advent; and to show that this event might be near at hand! There were peculiar features of construction, however, which made it difficult to determine the true line of measure of the Grand Gallery; but one reckoning pointed to the year 1882, which was only about seven or eight years ahead from the time of Mr. Glover's visit to India.

Soon after this, when visiting friends in Jeypore, I found there, in the Maharaja's library, a copy of Professor Piazzi-Smyth's "Our Inheritance in the Great Pyramid," which I read

with quickened interest, as well as other books sent to me from England.

Going on furlough to England in the spring of 1880, I spent some days in Egypt in order to visit this wonderful Pyramid. I distinctly remember that its present-day interest at that time attracted me to Egypt rather than to Palestine. I could not hope to make any fresh discovery, or even investigation; but traversing the mysterious passages, and seeing with my own eyes the sign-marks of the builder, indicating thousands of years ago the design so lately discovered, I was further stimulated to test the Scriptural correspondences supposed to be traced in the Great Pyramid, and the claim that it had a message for the present day, and for our own nation in particular.

In my research I was greatly helped by Professor Piazzi-Smyth, who was then Astronomer Royal for Scotland; and also by the Rev. W. B. Galloway, a venerable Scottish clergyman in London, whose writings are of inestimable value to those who know them, and whose friendship during the last twenty years of his life was to myself an inspiration and a joy.

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## CHAPTER II.

### A Unique Building.

The claim of some things is so great that they must be everything or nothing. A bank-note, or a diamond, if genuine, is good for all it is worth, but if false it is not only worthless but a fraud.

Can the Great Pyramid's claim to be of inspired origin be supported by Bible evidence? This, then, is the great question for our consideration.

The text most frequently quoted as referring to the Great Pyramid as a witness appointed for these last times is Isaiah xix. 19. "In that day there shall be an altar to the Lord in the midst of the land of Egypt, and a pillar at the border thereof to the Lord."

We have heard much of late of "The Day"—a day which was looked forward to as a day of war and conquest! "The Day" has indeed come; a day of battle and slaughter, and of almost universal war; the extent, duration, and issue of which cannot yet be foreseen or foretold.

But "*that* day," still future, which Isaiah foretold is to be a day of deliverance and healing. Of some erection, described as an "altar" and a "pillar," it is said:

"It shall be for a sign and for a witness unto the Lord of hosts in the land of Egypt: for they shall cry unto the Lord because of the oppressors, and He shall send them a Saviour, and a great one, and He shall deliver them."

The passage ends with a promise of blessing to Egypt, Assyria and Israel:

"In that day shall Israel be the third with Egypt and with Assyria, even a blessing in the midst of the land; whom the LORD of hosts shall bless, saying, Blessed be Egypt, My people, and Assyria the work of My hands, and Israel Mine inheritance."

Did "that day" of blessing for Egypt begin with the British "occupation" in 1882? We have noticed that the year 1882 had been indicated by a Grand Gallery measurement. Has that blessing for Egypt been confirmed by the British "Protectorate" in 1915?

If the reference in Isaiah is to the Great Pyramid it may be asked how it can be called both an "altar" and a "pillar," when it bears no resemblance to either? First of all let us note that the object of the building so called is to be "for a sign and for a witness."

We naturally associate an altar with sacrifices, yet we find an *altar of witness* erected at the time of the settlement of the tribes of Israel in Palestine. The two and a-half tribes, whose lot fell on the east of Jordan, feared that in time to come their children might be disowned by their brethren across the river, so they "built there an altar by Jordan, a great altar to see to." The other tribes of Israel remonstrated, and "gathered themselves together at Shiloh, to go up to war against them." They were pacified, however, when they heard that their brethren had built the altar "not for burnt-offering, nor for sacrifice; but that it may be a witness between us and you, and our generations after us." This interesting story, which is recorded in Joshua xxii., explains how an altar may be "for a sign and for a witness." Then as to the "pillar." It is stated on the authority of the eminent Hebraist, Dr. Margoliouth, that the word *matzaybhah*, here translated *pillar*, means rather an erection, a pile, a mausoleum, or any durable structure to commemorate some important historical event, and might well be applied to a pyramid; whereas a *pillar* would be more accurately represented by another Hebrew word (ammood), which, however, is not used.

This passage in Isaiah may, then, be taken to refer to a building of the nature of a monument to commemorate, or to foretell, or to do both. The custom of erecting stones as monuments was very common in ancient times. We read that "Jacob took the stone that he had put for his pillow, and set it up for a pillar and poured oil upon the top of it" after he had dreamed of the ladder set up on earth whose top reached to heaven" (Gen. xxviii.).

There is a familiar proverb that an inverted reason is like a pyramid standing on its apex. Now if that could in reality be done, then the top-stone of the Pyramid, which is a perfect model of the entire building, would be seen to be the foundation upon which the whole would rest.

The "head of the corner" was the very "stone which the builders rejected." They knew not the architect's plan, and that this stone, though first in his design, was the last to be placed as a crown to the edifice. God plans from above; man from below.

If God gave Noah the plan of the great ship, and to Moses the plan of the holy tent, both made of perishable materials, then there is nothing incongruous in the thought that the plan and measures of the time-defying Great Pyramid may have been likewise revealed to its builder four thousand years ago.

Zechariah saw a vision of an angel as "a man with a measuring line in his hand." We may imagine such an angel appearing to the chosen builder of the Great Pyramid, with—if you will—a model of the top-stone in his hand. That tiny thing would represent the whole building as to its outward form, giving the angle of the four sides, which could then be extended to the required dimensions. Or, our imagination need go no further than Zechariah's measuring rod—a straight line connecting two points. Let that line represent the height of the Pyramid, and the two points will represent the apex and foundation centre. The measuring line may be a cubit (like a yard measure) or a multiple of cubits, but the number of cubits, or measuring rods, must be given on a scale so that the Great Pyramid itself shall become a measuring line showing the distance of the earth from the sun to the round number of a thousand million!

If now from the central point, at the base of the Pyramid, a circle be described having the height of the Pyramid for its radius, then that circle will represent the earth's orbit round the sun, and the true length of the solar year.

This peculiar construction is picturesquely described in an article by Mr. Arthur Mee, in the *Children's Magazine* (March, 1912). "If we take the top-stone to represent the sun, and the unit by which they measured to represent a day, the length of the base round the 'sun' is 365 days, or just one year. The height and breadth of the Pyramid, calculated together in some way, represent the distance of the sun from the earth. The entrance tunnel points to the North Pole, and in various ways the Pyramid is found to express by its measurements the nature of the earth's revolution round its own axis. . . . It surely is not an accident that so many lines in the Great Pyramid fit in with so many of the measurements of astronomers. Whatever it may mean, we can never cease to wonder at the marvellous ingenuity and skill which could . . . register a knowledge of natural laws with almost absolute exactness in a building that took a hundred thousand men over twenty years to build."

As a circular building would not be easy of construction, and would not serve all the purposes desired, the circle is turned into a square. Never mind that no one knew how to do this 4,000 years ago. No one knew the distance of the earth from

the sun at that time and yet it is there in the Pyramid! How this was discovered will be recorded in a later chapter.

The plan of the Pyramid's construction having been traced so far, beginning with the height, and that height made the radius of a circle, and that circle turned into a square, whose perimeter is equal to the circumference of the circle, the corners of that square may be connected by diagonal lines, running through the centre of the circle. These two straight lines, giving the four points, or corners, of the square, will be found to have a special value of their own, besides laying out the whole site or position of the base.

The sides of the building face due north, south, east and west, and the four corner stones are fixed in sockets cut in the rock foundation. The corners are not all on the same level however. Only one corner—the south-east—goes down to the actual base, the other corners fitting in with the masonry courses, thus combining exactitude and economy. The south-east corner alone gives the true starting-point for the base measures, and the few remaining casing stones furnish the true angle from which to calculate the original height of the Pyramid.

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## CHAPTER III.

### The History of the Great Pyramid.

"It seems quite certain that Egyptian art is original, and not derived from that of India; and it may be concluded with great probability that the structures of Egypt are the oldest specimens of architecture in the world."—*Ency. Brit.*

Of the seven wonders of the world in the days of the old Greeks, the Great Pyramid, which was the oldest and greatest of the seven, is the only one remaining.

It is a new wonder now to find that the oldest of all the pyramids is the most perfect, and we may even say that the oldest building on the surface of the earth is the most perfect of all the millions of structures ever built.

Many have wondered how the great stones were raised to their place in the building, and what mechanical means existed in those days; but the way in which the great masses were put together is not so mysterious as the discovery of their being put together with the same kind of exactness that we find in a watch, and with equal evidences of design.

This is a puzzle for evolutionists who try to trace a descent, or ascent, in God's work, forgetful of what one wiser than the wisest of them wrote thousands of years ago: "Behold, this only have I found, that God made man upright; but they have sought out many inventions."

Dr. Seiss, in his "Miracle in Stone," says: "There is no

evidence on earth, known to man, that ever a true pyramid was built before the erection of the Great Pyramid of Gizeh. Here, then, is a fact to start with which utterly confounds the ordinary laws in human affairs. The arts of man left to himself never attain perfection at once. At all times and in all countries there is invariably a series of crude attempts and imperfect beginnings first, and thence a gradual advance from a less perfect to a more complete. Styles of architecture do not spring into existence like Minerva from the brain of Jupiter, full grown and perfect from the start. But here all the ordinary laws are reversed, and the classic dream finds reality. As with the beginning of our race, so with the pyramids, the most perfect is first and what comes after is deteriorate. The Great Pyramid comes upon the scene and maintains its grand superiority for ever, without any preceding type of its class whence the idea was evolved. Renan says, 'It has no archaic epoch.' Osburn says, 'It bursts upon us at once in the flower of its highest perfection.' It suddenly takes its place in the world in all its matchless magnificence, 'without father, without mother,' and as clean apart from all evolution as if it had dropped down from the unknown heavens. We can no more account for its appearance in this fashion on ordinary principles than we can account for the being of Adam without a special Divine revelation."

This oldest building in the world is also the largest ever erected by the hand of man. Its square base covers thirteen English acres; the area of each of its four triangular faces is about five acres. It contains more than five million tons of stone, and its total quantity of solid masonry is computed at about 89,000,000 cubit feet. Its original vertical height was 486 feet, which is about one hundred feet higher than St. Paul's Cathedral. It is fifty feet higher than St. Peter's in Rome, and covers nearly three times as much ground as that vast cathedral.

The whole building is supposed to be solid rock and masonry except the chambers and passages shown in the diagrams. Several courses of masonry are gone from the top, leaving a level platform; the polished casing-stones with which the four sides of the Pyramid are said to have been originally covered are all gone, one or two only having been discovered under the sand at the foundation level, fitted into sockets sunk in the rock. From these original corner-stones, discovered *in situ*, the true angles of erection were ascertained, and the base measurements confirmed. Even if all the casing-stones had disappeared, the angle-stones within the building (to which reference will be made later) would have preserved the true angle of erection.

The present dilapidated condition of the exterior of the Pyramid greatly increases the difficulty of getting correct

measurements of its base and height ; but so careful was the builder of his work, and for the preservation of its secrets, that all the exterior measures can be calculated by the floor-measurements of the King's Chamber.

Herodotus is the first historian whose account of the Pyramid has come down to us. He procured his informatian from an Egyptian priest about B.C. 450—that is, more than seventeen centuries after the erection of the Pyramid. Herodotus narrates, according to the Egyptian priests, that "Cheops, on ascending the throne, plunged into all manner of wickedness. He closed the temples and forbade the Egyptians to offer sacrifice to their gods, compelling them instead to labour one and all in his service, viz., in building the Great Pyramid.

"Cheops reigned fifty years, and was succeeded by his brother Chephren, who imitated the conduct of his predecessor and built a pyramid, but smaller than his brother's (the second pyramid) ; he reigned fifty-six years. Thus during 106 years the temples were shut and never opened."

Herodotus goes on to say that the next two kings, Mycerinus and Asychis, also built pyramids, but much smaller in size, and that they re-opened the temples and allowed the people to resume the practice of sacrifice. These two later kings were approved of by the Egyptians and the two former hated, and their "memory so detested," says Herodotus, "that the Egyptians do not much like even to mention their names. Hence they commonly call the pyramids (the great and the second) after Philition (or *Philitis*), a shepherd who at that time fed his flocks about the place."

Two things appear from this evidence of Herodotus :—

1st. That *Philitis was the architect,* or master-mind, who persuaded Cheops (or Shofo, as he is called by modern Egyptologists) to build the Great Pyramid.

2nd. That it was not the enforced labour in building the Pyramid which caused the hatred of the Egyptians, but *the closing of the temples* and stopping the worship of the bulls, cats, goats, beetles, and other detestable Egyptian gods.

### Discovery of Ascending Passage.

Passing by the fragmentary notices of the Great Pyramid found in other ancient records, we come to the romantic account of the Khalif Al Mamun, who forced an entry into the Pyramid A.D. 820, and accidentally discovered the ascending passages, which were up to that time unknown. The Khalif's workmen had been toiling for months and penetrated about a hundred feet into the Pyramid. When almost despairing of their hard and hitherto fruitless labour, one day they heard a great stone fall in some hollow space within a few feet on one side of them.

Pushing on energetically in the direction of the strange noise, and breaking through a wall surface they burst into the hollow way of the Descending Passage—"exceeding dark, dreadful to look at, and difficult to pass," they said.

Then was exposed what Greeks and Romans, Persians and Egyptians, never saw; for the falling of that stone revealed the chief leading secret of the building for the first time since its erection.

This large angular fitting stone that had made for ages, with its lower flat side, a smooth and polished portion of the ceiling of the inclined and narrow Entrance Passage, quite undistinguishable from any other part of the whole of its line, had now dropped on to the floor before their eyes. This revealed that there was just behind it—that is, at that point of the ceiling which it had covered—the end of another passage clearly ascending out of this descending one into which they had just burst.

But that Ascending Passage itself was still closed by an adamantine portcullis, or rather stopper, formed by a series of huge granite plugs of square wedge-like shape, dropped or slided down and then jammed in immovably from above.

After working round, rather than through, this formidable obstruction with immense labour, Al Mamun's workmen were at last rewarded by success, and were able to clamber, one after another, up the first Ascending Passage, and then more freely up the Grand Gallery, till they at last reached the King's Chamber, where they expected to find the *promised treasures* of the Pyramid so long sealed up; but, alas for their expectations! they found there only an empty granite chest or coffer without a lid.

The solution of the Pyramid's mysteries has shown that it contains *treasures* of a sort never anticipated, and that it is its own interpreter by means of measures indicated in itself. Dr. Piazzi-Smyth, late Astronomer-Royal for Scotland, together with his wife, spent four months in 1864—65 at the Great Pyramid, taking minute measurements and observations—the results or deductions from which are most astounding. "Truly," he says, "the Great Pyramid transcends in value all the rest, and stands out distinct and distinguished from all its fellows by its giant size, its wondrous internal structure, its superior age, more frequent historical notice, and also the hitherto inscrutable destiny of its purpose; the greatest of the seven old wonders of the world in the days of the Greeks, and the only one of them all which is still in existence on the surface of the earth.

## The First and Second Pyramids.

My first sight of the pyramids was obtained from the great mosque of Mahomet Ali in Cairo, about ten miles distant.

There appeared to be two pyramids of about equal size, standing side by side on the border of the desert. My first feeling was one of disappointment, that there was another pyramid rivalling in size and outward appearance the one called "Great."

It is in the outward appearance only, however, that the second pyramid at all resembles the first. Is has no ascending passages, and none of the marks of design evident in every measurement of the Great Pyramid. It is simply a copy of the first by an ambitious monarch who did not wish to be outdone. It is the *jawab* (or complement) of the other, so dear to the Oriental mind. I was reminded in looking on the meaningless second pyramid of some notable buildings at Agra and Delhi.

At the *Taj Mahal* in Agra there is on either side of that great mausoleum a smaller building like a mosque, one being a real mosque for worship, and the other a sham one to balance the other. But more than this, there is on the opposite bank of the Jumna the foundation for a second Taj; but the *jawab* of that unrivalled building never got beyond the foundation.

In the same way at the famous *Kutab Minar* at Delhi there is still to be seen the foundation, prepared centuries ago, for the erection of a second Minar close to the first. But the builder of the second Kutab had not counted the cost, and left his tower just visible above the ground; while the other is, or was until a few years ago, the highest *tower* in the world *rising from the ground.* The builder of the second pyramid certainly succeeded better than the would-be rival builders of the Taj Mahal and Katub Minar at Agra and Delhi. Yet, whilst at first sight the second pyramid appears to detract from the greatness of the other, it really establishes the superiority and unique character of the first. This is seen by a comparison of their internal structure, and by the absence in the second of all those marks of design and scientific teachings which abound in the Great Pyramid.

### The Pyramid's Position.

The position of the Great Pyramid is very remarkable, being both "in the midst of the land of Egypt and yet on the border thereof," as described in Isa. xix. 19, for it stands on the dividing line which separates the fertile valley of the Nile from the great Sahara. An American writer, in his graphic description of the view obtained from the summit of the Pyramid, has unconsciously recorded this striking feature of its position on the border of the desert and the Delta of the Nile:—

"On the one hand, a mighty sea of yellow sand stretched away toward the ends of the earth, solemn, silent, shorn of vegetation, its solitude uncheered by any forms of creature life; on the other the Eden of Egypt was spread below us—a broad

green floor, cloven by the sinuous river, dotted with villages, its vast distances measured and marked by the diminishing stature of receding clusters of palms. It lay asleep in an enchanted atmosphere. There was no sound—no motion. Above the date-palms, in the middle distance, swelled a domed and pinnacled mass, glimmering through a tinted, exquisite mist; away toward the horizon a dozen shapely pyramids watched over ruined Memphis; and at our feet the bland, impassable Sphinx looked out upon the picture from her throne in the sands as placidly and pensively as she had looked upon its like full fifty lagging centuries ago."

### The Sphinx.

The Sphinx—to which rather too high an antiquity has been ascribed—is little more than a stone's throw from the Great Pyramid, and must be seen by every visitor to Gizeh, but we can only turn aside to give it a passing glance. Its well-known Greek name Sphinx signifies "the strangler," given to it from the legend that it was in the habit of proposing riddles to travellers, and strangling those who were unable to answer.

In his book "Eothen" Mr. Kinglake (the historian of the Crimean war) many years ago wrote these remarkable and prophetic words describing the Sphinx:—

"And we, we shall die, and Islam wither away, and the Englishman straining far over to hold his own loved India, *will plant a firm foot on the banks of the Nile*, and sit in the seats of the Faithful; and still that sleepless rock will be watching, and watching, the works of the new, busy race, with those same sad, earnest eyes, and the same tranquil mien everlasting."

We have seen this prophecy pass into history, and the Englishman compelled, through the force of events, to "plant a firm foot on the banks of the Nile"—first by the British Occupation in 1882, and by the British Protectorate established in 1915.

Let us humbly thank God for the blessings conferred upon Egypt through British rule since the memorable events of 1882. After over thirty years' experience of Indian life, I can testify to the beneficence of British rule in that great empire, and others bear similar testimony regarding Uganda, Nigeria, and other parts of Africa.

## CHAPTER IV.

### The Tomb Theory.

"Inside of each pyramid, always low down, and usually below the ground level, was built a sepulchral chamber. . . . The Great Pyramid of Gizeh (Khufu's) is very different in its internal arrangements from any other known. . . . The chamber which is most normal in its situation is the Subterranean Chamber; but this is quite unfinished, hardly more than begun."—*Ency. Brit.*

The Pyramids of Egypt are generally regarded as the tombs of the kings, and doubtless the later ones are. It cannot be shown, however, that the oldest and largest of the pyramids was ever a tomb. Of what advantage, it may be asked, would be the geometrical and astronomical features found in the Great Pyramid if it was destined to be only a tomb? None of the tomb pyramids square the circle, or have any of the marks of design so apparent in every measurement of the Great Pyramid.

If a tomb, whose tomb was it? Certainly not that of Cheops, the Egyptian monarch during whose reign the Great Pyramid was said to have been built, under the direction of a mysterious foreigner who went by the name of Philitis, or Philition, of whom we shall have more to say hereafter.

We have the testimony of both Herodotus and Diodorus that Cheops was *not* entombed in the Pyramid, but was buried in a rude, deep tomb surrounded by a still deeper trench, into which filtered the waters of the Nile, described by Herodotus as "a subterranean region, on an island there surrounded by the waters of the Nile." Exactly such a locality, both sepulchral and with precisely the required hydraulic conditions, has been discovered about one thousand feet south-east of the Great Pyramid.

A possible reason for this obscure burial was given by Diodorus concerning Cheops and Chephren, the builders of the first and second pyramids: "Although those kings intended these for their sepulchres, yet it happened *that neither of them was buried there.* For the people being exasperated against them by reason of the toilsomeness of these works, and for their cruelty and oppression, threatened to tear in pieces their dead bodies, and with ignominy to throw them out of their sepulchres. Whereupon both of them dying commanded their friends to *bury them in an obscure place.*"

This seems to prove too much, however, and is fairly replied to by Colonel Vyse: "If Cheops reigned fifty years, and had sufficient power to construct the Great Pyramid, it can scarcely be supposed that his body was not deposited in it [if so intended], particularly as his successor is said to have reigned fifty-six years, and to have erected a similar tomb for himself, which he could scarcely have done had his predecessor's tomb been violated, or any doubt have existed about the security of his own."

Whatever may have been the intention of the builder of the

first pyramid, the fact appears to be well established that it was never used as a tomb, for no mummy has ever been found in it, nor any sarcophagus properly so called. It is true that in the King's Chamber, in the very heart of the Pyramid, there is an empty stone chest or coffer without any cover, which has been called "the porphyry coffer," though really made of dark red granite. Piazzi-Smyth calls this a "blind sarcophagus" or "symbolical coffin," though intended to serve other ends as a standard measure.

He gives the following reasons, which are admitted by all Egyptologists, against the theory of the Great Pyramid having been a tomb, or the granite coffer a sarcophagus.

1. "In no other pyramid is the sarcophagus *contained high up in the body of the pyramid*, far above the surface of the ground outside."

2. "In no other case is it *perfectly devoid of adornment or inscription.* Excepting only the sarcophagus of the second pyramid, which is not known to have ever been occupied by a mummy."

3. "That in no other case (not even in the second pyramid) *has the lid so strangely vanished.*"

4. "In no other case are the neighbouring walls so devoid of hieratic and every other profane mythological emblem."

5. "And it is confessed by all that the red granite *coffer*, with all that part of the Great Pyramid's *chambers* and *ascending passages* where it is found, is *entirely unique*, was unknown before Caliph Al-Mamoun's day, and is strictly peculiar to the Great Pyramid."

6. Dr. Piazzi-Smyth adds that there was no ancient attempt to build up this vessel in the King's Chamber in solid masonry, as in the case of the tomb pyramids. "But, on the contrary, there were magnificently built white stone passages of a most lasting description, ready to lead a stranger right up to this central chamber from the very entrance itself. While, more notably still, this shapely King's Chamber was intended to be *ventilated* in the most admirable manner by the air channels discovered by Colonel Howard-Vyse in A.D. 1837, as if in order that men might come there in the latter day, and look on and deal with that open granite chest"—a heritage for the living, and not a coffin for the dead.*

In addition to these reasons, derived from the unique character of the Great Pyramid among the many pyramids in Egypt, another argument may be set forth, which is suggested by an acquaintance with the royal mausolea in India, such as the Taj Mahal at Agra (the tomb of Nur Jehan and Shah Jehan), and the

* Mr. Dow Covington, an American Egyptologist and explorer, a few years ago succeeded in clearing some of the air-channels and so improving the ventilation that the temperature inside the Pyramid was reduced from 89 degrees to 76 or 77 degrees Fahr.

Akbar's Tomb at Sikundra, near Agra.

Cenotaph, or Imitation Tomb on Roof.

tomb of the emperor Akbar at Sekundra, near Agra. In both these tombs the bodies are buried in a subterranean chamber, whilst high above the ground are found imitation tombs, or cenotaphs, which are richly decorated with mosaic, or covered with Arabic inscriptions.

The accompanying illustrations of Akbar's tomb at Sekundra will show the magnificence of the palace of white marble and red sandstone built over the tomb of that monarch. This palace is several stories in height, and on the open roof at the top is shown the platform on which rests the cenotaph, or empty imitation tomb, surrounded by exquisite marble screens. This monumental cenotaph is plain compared with those of Nur Jehan and Shah Jehan in the Taj Mahal; but it is of pure white marble, and is said to have the name of God in a hundred forms in raised Arabic characters. At the very bottom of the building is a dark portal, giving access to the descending passage which leads to the subterranean chamber where the greatest of the Mogul emperors was buried. Here the real tomb is of the plainest description, whilst high up, on the fourth storey, is the beautiful representation of the tomb which is seen by every visitor.

Akbar was contemporaneous with Queen Elizabeth, and died in 1605, after reigning half a century, so that his monument only dates from the early part of the seventeenth century; yet I think its realized plan is an echo of the apparent intention of the first pyramid builders—viz., to have a subterranean sepulchral chamber in which Cheops' sarcophagus might be placed, and then to have the "symbolical coffin" higher up, in the grandest and most central part of the building.

All the subterranean tomb-chambers I have seen in India are of the plain order of the subterranean chamber in the Great Pyramid, only, in the former, the roof, walls, and floor are all equally well finished. In the Great Pyramid's subterranean chamber, however, we have a good smooth roof or ceiling, and smooth sides cut out of the rock, whilst the excavation of the floor is left in a rough and uneven state, as if intended to form a striking contrast to the sides and roof. If the designer of the Pyramid had intended the building to serve the purpose of a tomb, then this subterranean chamber should have been his first care, and all other designs should have been subservient to this.

In a dark rock-hewn chamber, where the height from floor to ceiling ranges from four to thirteen feet, there can be no resting place for the living or the dead. Apart from the uneven footing, the shortest man could not stand upright in the lowest part, whilst in another part the tallest might stumble into a pit and break his neck. Then, as to bringing a coffin, or sarcophagus, into such a place, the very first *conditio sine qua non* is a smooth bottom; the walls and roof may form a

dome, or a square, oblong, hexagonal, or octagonal chamber, but the floor must be smooth; whereas here we have what is best described as a veritable bottomless pit, and this fact alone is fatal to the tomb theory of this pyramid.

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## CHAPTER V.

### The First Discovery. Squaring the Circle.

"He that sitteth upon the circle of the earth."—Isa. xl. 22.
"The four corners of the earth."—Isa. xi. 12; Rev. vii. 1.

The late Mr. John Taylor (publisher to the London University), who gave 30 years' thought and study to the subject, was the first to point out the hidden mysteries of the Great Pyramid, in 1859, when he produced his book, entitled "The Great Pyramid, Why was it Built, and Who Built it?" His first-discovered theorem with regard to the Pyramid's shape was that in its original condition its central vertical height was to twice the breadth of its square base as the diameter is to the circumference of the circle [*i.e.*, 5813″ : 9131″ × 2 : : 1 : 3·14159, &c. This value of the circumference of a circle in terms of its diameter is mathematically represented by the Greek letter $\pi$].

"To state the same fact differently, the *vertical height of* the Great Pyramid is the *radius of a theoretical circle*, the length of whose circumference is equal to the sum of the lengths of the four straight sides of the actual square base of the building."

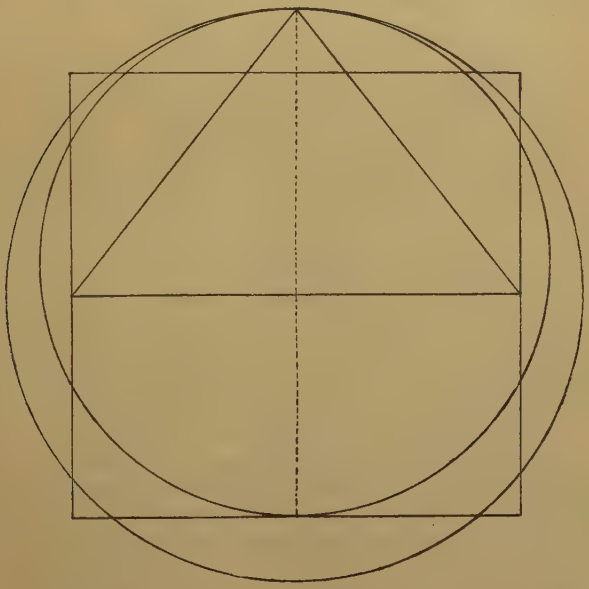
On this Dr. Piazzi-Smyth remarks that "it is neither more nor less than that celebrated practical problem of the mediæval and modern ages of Europe, '*the squaring of the circle*'; and the thing was thus practically done, truly and properly, at the Great Pyramid thousands of years before those mediæval days. . . . Not one out of all the 37 other measured pyramids in Egypt has been proved to be endowed even approximately with this particular proportion of height to breadth of base.

"If, therefore, the quantity is really found built into the Great Pyramid with exactness as well as magnitude, characterising and utilising the *whole* of that vast mass, it not only *discriminates that building* at once from all the other pyramids of Egypt, but proves that such a distinguishing feature must have been the result either of some most marvellous accident, or of some deep wisdom and settled determined purpose; in this case, too, not less than 3,000 years in advance of the learned world in the building's own time."

This geometrical proportion found in the Great Pyramid, and

in it alone, has been very lucidly explained, and its importance pointed out, by the late Charles Latimer, of America, who says :—

"The proportion of this structure is such that if you describe a circle with the height of the Pyramid as radius, the perimeter of that circle will be exactly equal to the sum of the four base sides, upon the level of the south-east socket. Or stated in mathematical terms, the height is to twice the length of one base side, as one is to *Pi*, the *Pi* being simply the proportion of the circumference to the diameter of a circle. Now, the proportion of diameter to the circumference of a circle, is the great key to unlock the secret of the whole structure. It was not known to the world, except approximately, until Rudolph Von Ceulen, in the sixteenth century.* The ancients did not understand it farther than the first place of decimals. Von Ceulen had his discovery engraved upon his tombstone. All school children know the proportion; it is 3·1416 approximately. Without this number it is useless to undertake to study the mathematics of the Pyramid, but with it the work is within the grasp of every person who can add, subtract, multiply, and divide."



This geometrical proportion is found in other parts of the Great Pyramid, and notably in the King's Chamber, and in the

* MacLaurin, an eminent mathematician and friend of Sir Isaac Newton, in his "Treatise on Fluxions," has described Archimedes' method of calculation in the 3rd century B.C., which approximately amounted to the squaring of the circle.

Antechamber, where the measurements correspond with a square and a circle, having equal areas.

The accompanying diagram shows how both the perimeter and the area of the Pyramid can be represented by circles, whose radii are determined by the measurements of the Pyramid itself.

The square and triangle show the relative proportion of the Pyramid's base to its height. The larger circle, having the height of the Pyramid for its *radius*, has a circumference equal to the *perimeter* of the Pyramid. The smaller circle, having the height and half the base of the Pyramid for its *diameter*, has an *area* equal to that of the Pyramid's base (as shown by the dotted line).

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## CHAPTER VI.

### The Measures Used in the Great Pyramid.

"In the man's hand a measuring reed of six cubits long, of a cubit and a hand-breadth each."—Ezek. xl. 5.

"A full reed of six great cubits."—Ezek. xli. 8.

If we received a message written in cipher our first thought would be to discover the key. In a building whose secrets may be conveyed by line and measure, the first thing is to discover the unit of measure employed by the designer. We must see that the Pyramid is true to itself first of all, and then we may begin to look for a connection between its measurements and other things. Instead of bringing our theories to the Pyramid, seeking to make it fit in with them, let us first seek to interpret the teaching of the Pyramid itself.

There is a tradition, handed down by the ancients, and mentioned by Ibn Abd Alhokm, an Arabian writer of the 9th or 10th century, that the Great Pyramid contains "all things that had been told by wise men; all recondite science of the stars, of arithmetic, of geometry, divers celestial spheres, and what they operate in their aspects, *what has been, and what shall be, from the beginning of time until the end thereof.*"

As there are no inscriptions of any kind in the Pyramid, it is manifest that if it contains any secrets or treasures of knowledge, these can only be found out by number and measure. Is there any key which can fit and open the lock? And does the Pyramid itself give such a key?

In an earlier chapter we have spoken of geometrical proportions; these are independent of the size of the building, or of the measures used in its construction; but if we can ascertain the measures employed by the builder, we may find out more of the secrets which he entrusted to the keeping of the Pyramid for future generations.

The first unit of measure mentioned in history is the cubit, in

connection with the building of the Ark by Noah. A cubit, among both ancient and modern nations, is, however, a most uncertain quantity. An Indian cubit, or hand, is the distance from the elbow to the tip of the middle finger; this is, roughly, about eighteen inches, but it may be more or less, according to the measurer's height, and length of arm.

The cubits of Greece and Rome were 18·24 British inches, whilst the cubit of Egypt, a far older land than Greece or Rome, was always longer and close to 20·68 (roughly 20·7) British inches.

Sir Isaac Newton, in his "Dissertation on Cubits," distinguishes between "the *profane* cubit" and the "*sacred* cubit of the Jews," which he shows was longer by several inches, and was treasured up and used by some very limited branches of the House of Shem. The exact date of its promulgation Newton does not attempt to fix, but alludes to the certain fact of its having become the "proper and principal cubit" of the Israelites, long before they went down to Egypt (about 1940 B.C.).

Without fixing the precise length of this sacred cubit, Newton said it must be, within a small fraction more or less, just 25 British inches.

This would appear to be confirmed by the Prophet Ezekiel, who, writing in the land of the Chaldeans, where the profane cubit would be in use, has it distinctly revealed to him (xl. 5) that the cubit to be used in the erection of the future temple is "a cubit and a handbreadth," that is, about 25 inches. This particular measure is elsewhere called by Ezekiel a "great cubit" (Ezek. xli. 8).

In contrast, no doubt, with this sacred "great cubit," we have mentioned in Deut. iii. 11, "*the cubit of a man*" in the description of the iron bedstead of Og, the giant king of Bashan: "Nine cubits was the length thereof, and four cubits the breadth of it, after the cubit of a man." This would be at least 13½ feet long, according to the smaller profane cubit. Not a mean sized bed even for a giant!

### The Pyramid Cubit and Inch.

There is a marvellous confirmation of the use of this sacred cubit of about 25 British inches in the construction of the Great Pyramid, to be found in the building itself on the wall of the Antechamber, between the Grand Gallery and the King's Chamber. On a block or slab, called by Professor Greaves "the granite leaf," there is a projecting boss, approximately five British inches broad, and this, the one-fifth part of the cubit which we find symbolised elsewhere, is divided before our eyes into five again; for the thickness of this remarkable boss is one-fifth of its breadth, the granite leaf having been reduced by one inch over the remainder of its surface, in order to leave this boss

standing out in relief. This boss, too, is not in the centre of the granite leaf, but exactly one pyramid inch away on one side of the centre, as if the architect would thus so duplicate his standard of measure, and on such a solid mass of masonry, as to render it next to impossible for it to be lost. Further, the distance from the centre of the boss to the Eastern end of the leaf is just 25 of these inches, so that we have tied up here the *whole cubit*, its *fifth part* or palm, and its *one twenty-fifth part*, or inch unit.

By a similar method, and more exactly measurable parts, this cubit of 25·025 British inches is found still more remarkably indicated, or rather monumentalised, in the so-called Queen's Chamber of the Great Pyramid.

### Origin of the Sacred Cubit.

But what is the origin of, or reason for, these particular measures? In what does their "sacred" character consist; and have they any relation to other things?

Before the discovery of the key to the inch, five-inch, and cubit measure just described, in the boss on the granite leaf of the Antechamber; John Taylor, led by the number of British inches which measure the earth's polar-axis length—that is, the axis of rotation—and other men also, led by the dominance of *five* in the Pyramid's construction, ventured the suggestion that the author of the Great Pyramid's design employed decimal and quinary arithmetic, and that he had, and used as his smaller unit of measure, one-fifth part of a fifth of his particular cubit, forming thereby an inch.

From this inch our British inch, which is just a thousandth part less (*i.e.*, about half a hair's breadth), was probably originally derived, having through the lapse of ages lost a thousandth part of its proper length. Yet it is just that apparently unimportant quantity which enables the round, and at the same time grand, Pyramid number of five hundred

millions of them (*i.e.*, Great Pyramid, not British inches) to measure the length of the earth's polar diameter with exactitude.

The true length of the earth's axis of rotation, according to the best calculations, is from 500,378,000 to 500,560,000 British inches, or taking 500,500,000 as very near the mean, this gives *exactly* 500 *million Great Pyramid inches.* As the Great Pyramid inch is a five hundredth millionth part of the earth's whole polar diameter, so the cubit containing 25 of these inches is a twenty millionth part of the same, or a ten millionth part of the earth's *semi*-axis of rotation (or radius). It was *after* Mr. John Taylor had pointed out how near the British hereditary inch is to an integral earth measure that Sir John Herschel, in 1869, in defending our traditional national measures against those who were moving Parliament to introduce the French system, said that the true basis for a scientific unit of measure is the earth's polar axis, and if that be divided into *five hundred million parts*, one such part will differ from the standard British inch by the infinitesimal amount of only one thousandth.

The French metre of 39·371 inches is supposed to be a ten millionth part of the quadrant of the earth's surface at the particular meridian of Paris—that is, of a curved line from the North Pole to the Equator. It is shown, however, that it is not true to that, owing to an error made at the time of calculation; so that the metre, as a unit of measure, is not even scientifically correct. Apart from the miscalculation of the atheistic *savants* —who sought at the time of the Revolution to abolish the Christian religion, as well as the hereditary weights and measures of all nations—to take a curved, crooked line, drawn on the earth's exterior, in place of the straight internal axis of rotation was, as Sir John Herschel declared, "not a blunder only, it was a sin against geometrical simplicity." The same authority pronounced the French metre to be "the newest and worst measure in the world." Another speaks of it as an "inconvenient, inaccurate, and *unstridable* measure."

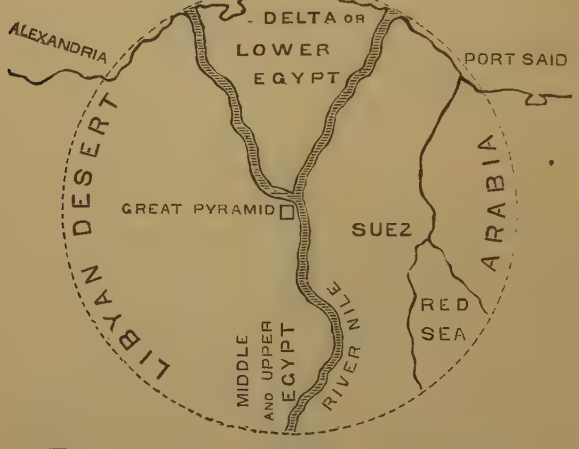
The Great Pyramid cubit, of a ten millionth part of the earth's semi-axis of rotation, is probably identical in length with that previously used by Noah in building the Ark (Gen. vi. 15, 16), and afterwards Divinely dictated to Moses for the Tabernacle, and to Solomon for the construction of the Temple (Exod. xxv. 9, 10; 1 Chron. xviii. 11, 12; 2 Chron. iii. 3, 4).

## CHAPTER VII.

### The Pyramid's Position.

"In that day there shall be an altar to the Lord in the midst of the land of Egypt, and a pillar at the border thereof to the Lord. And it shall be for a sign and for a witness unto the Lord of hosts in the land of Egypt."—Isa. xix. 19.

Reference has already been made (in Chap. III.) to the striking position of the Great Pyramid in regard to the land of Egypt, that it is both "in the midst of the land of Egypt" and at the same time "at the border thereof," being on the border of the great desert. This remarkable feature of the Pyramid's position is better understood by reference to a good map showing the sector-shaped delta of Lower Egypt. If the circle be completed of which the coast-line of the Nile delta is an arc, it will be found that the Great Pyramid stands at the centre of that circle. The manner in which this interesting discovery was made is described by Dr. Piazzi-Smyth in "Our Inheritance in the Great Pyramid."




(From "The Great Pyramid," by F. H. Gordon.)

Mr. Henry Mitchell, chief hydrographer to the United States Coast Survey, having been sent in 1868 to report on the progress of the Suez Canal, was much struck with the regularity of a certain general convex curvature along the whole of Lower Egypt's northern coast—roughly from Alexandria to Port Said, *i.e.*, the whole delta of the Nile.

To his mind, and by the light of his science, it was a splendid example, on that very account, of a growing and advancing coast-line, developing in successive curves, all struck one after

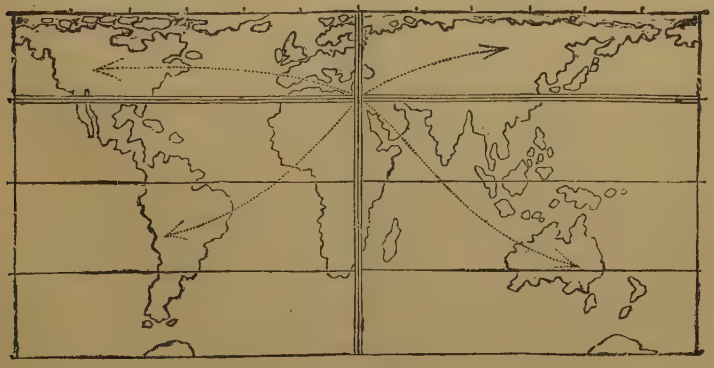
and beyond the other from a certain central point of physical origination in the interior. Mr. Mitchell then sought, with the aid of a good map, with variations of direction and radius carried southward, until he had got all the prominent coast points to be evenly swept by his arc, and then, looking to see where his southern centre was, found it upon the Great Pyramid, immediately deciding in his mind "that that monument stands in a more important physical situation than any other building yet erected by man."

Many others have recognised the unique and significant situation of this vast erection; for instance, "when Napoleon Bonaparte sent his academician *savants* to Egypt in 1779 they perceived how grand, truthful and effective a trigonometrical surveying signal the pointed shape of the Great Pyramid gratuitously presented them with; and they not only used it for that purpose, as it loomed far and wide over the country, but employed it as a grander order of signal also—to mark the *zero meridian of longitude for all Egypt.*"

It has been found also that there is more earth and less sea in the meridian of the Great Pyramid than in any other meridian all the equator round. Those who desire "unification of longitude" might therefore take it as a prime meridian for all nations. Again, taking the distribution of land and sea in parallels of latitude, there is more land surface in the Pyramid's general parallel of 30° N. than in any other degree, so that the two grand solid man-inhabited-earth-lines—the one of most land in any meridian, and the other of most land in any latitude—cross on the Great Pyramid.

More than this, on carefully summing up the areas of all the dry land habitable by man all the wide world over, the centre of the whole falls within the Great Pyramid's special territory of Lower Egypt.

This may be seen at a glance in the accompanying diagram, which includes America and Australia, which were unknown at the time of the building of the Pyramid.



From a naval point of view it has a stronger claim to be a zero of longitude for all nations from the fact that its *nether* meridian, or the continuation of its Egyptian meridian round the opposite side of the world, forms the most suitable possible line of locality for circumnavigators of the globe to change their day of reckoning as they pass it going from E. to W., or from W. to E., because it ranges its whole length from S. to N. Pole, excepting only near Behring's frozen straits, through the unpeopled N. and S. Pacific Ocean.

The Egyptians could never have made any of these calculations; they knew nothing of the general arrangement of earth and sea surface over the globe, for they figured the earth in their hieroglyphics as a flat cake of bread (like an Indian *chapati*). But the directors of the building of the Great Pyramid, says Dr. Piazzi-Smyth, "were not natives of Egypt, nor worshippers with them, but came into Egypt out of a country having a different latitude and longitude, and went back again to that country of theirs immediately after they had built it in all its surpassing purity and perfection. Yet there, in their own country, though no mean architects, they built no second pyramid. Will not that go far to indicate that, assisted by a higher power, they had been taught and well knew of early time that there was only one proper and fully appropriate spot all the wide and *round* world over whereon to found that most deeply significant structure they had received orders to erect on a certain plan, and not for their own, neither for any Egyptian purposes?"

May not this Great Pyramid be one of the "signs and wonders" which Jeremiah declared to have been "set in the land of Egypt unto this day by the great, the mighty God, Jehovah of hosts"? (Jer. xxxii. 18—20).

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## CHAPTER VIII.

### Astronomy and the Great Pyramid.

"The heavens declare the glory of God, and the firmament sheweth His handiwork."—Psalm xix. 1.

Having seen the Pyramid's relation to the planet on which it stands as its most permanent monument, we may go on to consider its teachings concerning the sun and stars.

The mathematical proportions of the Great Pyramid and its astronomical relations are acknowledged by the highest scientific authorities. The multiplication of these marks of design lessens the probability of the Pyramid having been ever intended for a tomb, apart from the independent testimony of history that it was never so used.

If, then, the Great Pyramid was not built for a tomb and was

never used as such, what purpose did it serve? It was an astronomical observatory some are ready to say. In support of this theory, it is shown that the building is *truly oriented*, or placed with its sides facing astronomically due N., S., E. and W.

It was also pointed out by Sir John Herschel in 1838 that the angle of the descending "Entrance Passage" had a special astronomical meaning. He discovered that about 4,000 years before that time, a notable star would have been observed from that passage—viz., *Alpha Draconis*—the Polar Star of that period. This would indicate *the date of the Pyramid's erection* somewhere about 2160 B.C. Dr. Piazzi-Smyth, when Astronomer Royal for Scotland, further discovered that at the time Alpha Draconis was looking down the Entrance Passage of the Great Pyramid, more accurately about 2170 B.C., *Alcyone*, the chief star in the Pleiades, was at the same time crossing the meridian above the Pole. This star is even more important for chronology; and, to add to the value of the combination, the meridian of the equinoctial point of the heavens coincided with the Pleiades.

It should be noted that the above-mentioned dates are only given approximately, and it may be impossible to point to the exact moment, or even to the very year, when this stellar combination occurred. It is obvious, however, that this marked an epoch which may be regarded as the starting-point of a new astronomical or celestial era, for that same combination of stars will not occur for many thousands of years.

### The Precession of the Equinoxes.

This may in popular language be described as the vast cycle which forms, as it were, the astronomical clock of the heavens. Like the dial of a clock this celestial cycle has been divided into twelve parts, known to us familiarly as the signs of the Zodiac. This represents the sun's apparent course among the stars, and the time occupied in the completion of the circuit is estimated by astronomers as from 24,450 to 26,000 years.

Inasmuch as certain measurements in the Great Pyramid correspond with this period, let us test the theory of design by the facts of astronomy.

Chambers' Encyclopædia gives 25,868 years; and this is given more definitely by another authority as about nine and a half million of our days, or 25,868 of our years, to come back again to the exact point at which the calculation was begun. Barlow and Byran's "Mathematical Astronomy" gives 25,800 years, calculated at the rate of a yearly recession of 50·2 seconds. Another says, "The advance of time, as measured by the recession of the equinoxes, proceeds at the rate of one sign in about 2,152 years." At this rate we should have 25,824 years for the twelve signs of the Zodiac.

For the sake of illustration, we may compare the simultaneous commencement of the solar or equinoctial and siderial years

with the position of the hands on the dial of a clock at the hour of twelve, or we may imagine the first day of a new century being Sunday, when, at the hour of midnight, there would be a simultaneous beginning of the century, and of the year, month, week, day, hour, minute, and second.

Dr. Piazzi-Smyth has shown, in "Our Inheritance in the Great Pyramid," that the number of years in the precession of the equinoxes is found twice at least, in measures of an inch corresponding with a year, in different parts of the building. The number of inches in the two diagonal base lines, which, crossing one another in the centre, give the four corners of the building, and so lay out its whole position, is 12,913·26 each, or 25,827 together, to the nearest inch. Also, whether by coincidence or design, the number of inches in the circuit, or perimeter, of the Pyramid, at the height of the King's Chamber on the 50th course of masonry, is 25,827! The base lines are calculated on the plane of the south-east corner, which is the true base, and the measures at the King's Chamber are calculated according to the circuit of the original casing stones, which is the true perimeter.

It was Hipparchus who first noted within historic times the retardation in the time of the rising and setting of the stars which explains the precession of the equinoxes. This was about 150 B.C., and yet fully two thousand years before the time of Hipparchus, the builder of the Great Pyramid had recorded the number of years in that vast cycle, which astronomers now confirm after centuries of painstaking investigation.

This point is of such great interest, both in connection with the Pyramid itself and with chronology, that I have sought to make it as plain as possible, and now, at the risk of some repetition, I will give Dr. Piazzi-Symth's summing up of the various astronomical facts previously enumerated.

1. The Great Pyramid is *astronomically oriented* in its sides, and its passages are in the plane of the meridian.

2. The Entrance Passage, with its altitude angle of 26° 18′ nearly, *points* 3° 42′ vertically below the Northern Pole of the sky.

3. In or about the year 2170 B.C. *Alpha Draconis* was 3° 42′ from the Pole of the sky, and therefore looked down the axis of the Entrance Passage, when at its *lower* culmination.

4. When Alpha Draconis was so looking down the Entrance Passage in the north, then *Eta Tauri* (*i.e.*, Alcyone), the chief star in the Pleiades group, was crossing the local terrestrial meridian, towards the south in the vertical plane of direction of the Grand Gallery, but at a point high up in the sky, near the equator.

5. At the same time, and about 2170 B.C., the *celestial meridian of the vernal equinox* also coincided with the same Eta Tauri star, and gave it for the time an extraordinary chronological super-eminence over all others.

6. That *whole stellar combination* had not taken place for 25,827 years previously, and will not take place again for 25,827 years subsequently. This is the period astronomically known as the "*precession of the equinoxes.*" Here, then, is the commencement of a new era, or cycle of time, indicated by the Pyramid's construction; the Entrance Passage pointing to Alpha Draconis, and the Grand Gallery, with its *seven overlappings* in the same meridian plane as the Pleiades, showing its reference to the seven stars.

Originally the most barbarous tribes, as well as the most civilised nations, had but one system of chronology, by beginning the year on the night when the seven stars called the Pleiades were at their culminating point in the heavens at the hour of midnight.

In Job, one of the very earliest books of the Bible, we read of the "sweet influences of the Pleiades," understood by some to refer to the genial weather of spring, which was supposed to be somehow caused by the peculiar position of the Pleiades in the sky at the spring season.

"The sweet influences of the Pleiades" are thought by others to refer to the power of attraction which *Alcyone*, the chief star of the group, and the one whose position is recorded in the Great Pyramid, is supposed to exert as the centre around which our whole solar system revolves.

### The Length of the Solar Year.

Before referring to the Great Pyramid's measure of the length of the solar year, we will turn to the statements of astronomers. A book on astronomy by J. Norman Lockyer, F.R.S., published in 1876, gives the length of the solar year as 365 days, 5 hours, 48 minutes, and 46·054440 seconds. "Mathematical Astronomy," by Barlow and Bryan, gives 365 days, 5 hours, 48 minutes, 45·51 seconds, as the length of the tropical year in mean time.

We have already referred to the true length of the base line of the Pyramid. It was shown that the Great Pyramid's cubit of nearly 25·025 British inches, which is a ten-millionth part of the earth's semi-axis, when multiplied by the number of days in the year gives the length of one side of the Great Pyramid, viz., 9,130·05 Pyramid inches, or 9,140 British inches. Otherwise expressed, this nature-derived cubit of 25 Pyramid inches is contained in each side of the building just as many times as there are days in the year. "It is a noble and fitting thought," as remarked by Dr. Seiss, "that as the existence of an axis of rotation in the earth *makes* the days, the grand standard of length founded on that axis should *count* them."

Again, the *united length of the four sides* is 36,524·2 Pyramid inches. By removing the decimal two places we have the precise length of the solar year at the rate of 100 inches to a day,

*i.e.*, 365·242 or 365 days, 5 hours, 48 minutes, 49 seconds and a fraction, which makes it necessary for us to add one day every four years and to omit one day every hundred years to keep our reckoning nearly right.

Can we doubt that the builder of the Great Pyramid derived his measures from the size, form and movements of the earth, when we find that his cubit gives the true length of the solar year on one side, or of four years, without the need of a leap-year, in the whole perimeter? Or, reckoned in inches, that the perimeter of the base shows the length of the year at the rate of a hundred inches for a day, or of a century at the rate of an inch for a year?

## The Sun's Distance.

Turning now to the distance of the earth from the sun, we find that modern astronomers place this between the limits of 91 and 93 millions of miles. Lockyer gives 91,430,000 miles, "Mathematical Astronomy" 92,800,000 miles, the late Sir Robert Ball 92,700,000 miles, for the sun's mean distance from the earth.

Roughly speaking, we may say that the latest computations of scientific men vary from $91\frac{1}{2}$ to $92\frac{3}{4}$ millions of British miles for the sun's mean distance. Mr. Stone wrote in 1878 to the *Times* from the Royal Observatory, Cape of Good Hope, stating that he had carefully discussed the observations taken by the transit of Venus expedition, 1874, and that his results confirmed the more recent determinations. "I believe," he says, "that the sun's mean distance is confined within the limits of 91,600,000 and 92,000,000 miles."

The manner in which the sun's distance was calculated and discovered in the measurements of the Great Pyramid seems in itself a confirmation of the principle which we have seen to be manifested in every design and detail of the edifice.

The late Mr. William Petrie, C.E. (father of Professor Flinders Petrie, to whom we are indebted for the "unwitting confirmation" of Piazzi-Smyth's theoretical measures of the exterior of the Great Pyramid), was a devout Christian as well as an eminent engineer and mathematician. Mr. Wm. Petrie was led by the geometrical proportions of the Pyramid, and especially its squaring the circle, together with the measures of the base as representing the solar year, to the simple calculation which revealed the record of the sun's distance from the earth in the vertical height of the Great Pyramid.

He had remarked that the circle typified by the base of the Great Pyramid had been already proved to symbolise a year, or the *earth's annual revolution around the sun*, and the *radius* of that typical circle had also been shown to be the *ancient (or geometrical) vertical height* of the Pyramid—the most important and unique line which can be drawn within the whole edifice.

"Then that line," said he, further, "must represent also the *radius of the earth's mean orbit* round the sun, however far away that may be, and in the proportion of 1 to 1,000,000,000, *i.e.*, by 10 raised to its ninth power."

Mr. Petrie fixed upon this proportion because he found that half the diagonal of the base was to the height of the Pyramid as 10 is to 9, thus taking one earth-line and one sky-line as indicators. He then reduced the 5,813 pyramid inches of the original height to British inches and multiplied this by the ninth power of 10, the result in British miles being 91,840,000 nearly.

This calculation was made by Mr. Petrie in 1876, when he supposed the sun's distance to be 95,000,000 miles, so he put aside his figures until he chanced to hear the result of the more recent Venus-transit calculations, when he showed how the Great Pyramid result of 91,840,000 stood between the maximum and minimum determinations of the astronomers.

"In France, M. Puiseaux, who had bestowed very great and laborious attention to the subject and felt confident that he could not be more than a few hundred miles in error, put down the most recent estimate of the sun's distance at 91,840,270 miles . . . actually within 270 miles of the exact pyramid figures! On the announcement of this result the French paper, *Les Mondes*, very justly exclaimed, '*La Grande Pyramide a vaincu*'—THE GREAT PYRAMID HAS CONQUERED" (see "A Miracle in Stone," p. 134).

The Great Pyramid result of about 91,840,000 miles is *between the latest* and supposed best *conclusions* of modern science, and is almost exactly the mean between its maximum and minimum limits. For more than 4,000 years has this record stood there, far in advance of human science, for in the time of Herodotus the sun was supposed to be only 10 or 12 miles from the earth. By slow degrees it crept up to 10,000 or 15,000, subsequently to 36,000,000, then to 75 or 78 millions, and finally during last century to the exaggerated 95 millions. It is only within the last few years that this error in computation has been corrected and the present estimate of 91 to 93 millions generally accepted. After this, one would hardly question the Great Pyramid's claim to be regarded as a first-class astronomical observatory, but surely it is something far *more* than this!

*Whence*, it may well be asked, did the architect derive his marvellous wisdom? Certainly not from the ancient idolatrous Egyptians. Moses was "learned in all the wisdom of the Egyptians," but they had no such wisdom as this. Egypt disowned the Great Pyramid and detested the very memory of its builders. Yet "there is here wheel within wheel of appropriate and wise meaning far above the then contemporary know-

ledge of man, and indicating far more than any mere single case of simple coincidence of numbers.

"There is such an evident and peculiar connection of all the parts of the Great Pyramid with each other and with the heavens and the earth as to leave no doubt upon an unprejudiced mind that its architect had a *deep design and settled purpose in its construction*," and yet this "deep design and settled purpose" has been *hidden* until this very generation, as though a part of the design was to keep the purpose secret till the time of the end. In the same way Daniel was commanded to "shut up the words and seal the book even *to the time of the end;* many shall run to and fro, and knowledge shall be increased" (Dan. xii. 4).

May it not well be that the discovery of these secrets is one amongst the many *signs of the times* which indicate that the time of the end, foretold by Daniel, is at hand?

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## CHAPTER IX.

### The Builder of the Great Pyramid.

"Where wast thou when I laid the foundations of the earth?
Declare, if thou hast understanding.
Who determined the measures thereof, if thou knowest?
Or who stretched the line upon it?
Whereupon were the foundations thereof fastened?
Or who laid the corner-stone thereof;
When all the morning stars sang together,
And all the sons of God shouted for joy?"

Job xxxviii. 4—7, R.V.

If we admire the genius of the man who has done more than any other to bring to light the treasury of knowledge contained in the Great Pyramid, what shall we think of the man who planned this wonderful building, and caused it to be erected in all the perfection of its pristine glory?

A great mystery hangs over the personality of the unknown architect, and as an instance of self-effacement he is unsurpassed. All we know about him is that the Egyptian priests described him to Herodotus as a shepherd, and named him Philition, or Philitis. This was probably a descriptive rather than a personal name, and may have been derived from Philistia, the country with which he was connected.

Concerning this shepherd-prince Philitis, we are told (by Manetho, who wrote about 300 B.C.) that after building the Pyramid, he and his people, to the number of 240,000, quitted Egypt by capitulation with all their families and effects, and proceeded to Judæa, and built there a city of sufficient size to contain this multitude of men, and named it *Jerusalem*. It is well known that Jerusalem was not built by the Jews. It had

had a history of about a thousand years before it was captured by David. In the time of Abraham it was the seat of a great king, to whom Abraham himself gave tithes, and from whom he received a blessing.

A hundred thousand men are said (by Herodotus) to have been employed for thirty years in the construction of the Great Pyramid. Ten years appear to have been spent in making a causeway from the Nile and in preparing stones at the quarry, and another twenty years in the actual construction of the Pyramid.

The work may have been begun about B.C. 2,200, and finished about B.C. 2,170, which has been agreed upon by astronomers as its own recorded date of erection. It is reasonable to conclude that the passages were completed which mark the position of stars at that time.

If Philitis built Jerusalem soon after this he must have been contemporary with, though somewhat older than Abraham, and is probably identical with the mysterious *Melchizedek*—which is evidently his typical and not his proper name, "he being first by interpretation King of Righteousness, and after that also King of Salem, which is King of Peace," but of whose birth and death under that name no record is given.

Melchizedek is thought by many to be identical with the patriarch Job, who, as a shepherd-prince, answers to the description of Philitis given to Herodotus by the Egyptian priests.

In general character and position Job and Melchizedek appear to be one and the same. The writer of the Epistle to the Hebrews tells his readers (chap. vi. 4), "to consider how great this man [Melchizedek] was," and of Job the sacred record is, "This man was the greatest of all the men of the East." Melchizedek was "priest of the Most High God," and of Job it is written that he sent and offered burnt offerings for his sons and daughters continually. Melchizedek was a princely personage—"King of Salem"; and all agree in assigning a princely rank to Job. Also Melchizedek was a worshipper of the one true God, outside of the Abrahamic line, and the same is true of Job. Job lived 140 years after his affliction, and had before that ten sons and daughters, grown up and settled in life, so that his age must have exceeded 200 years, which was more than that of Abraham or any of his descendants. This points to Job having belonged to an earlier generation than Abraham, though probably for a time contemporaneous with him.

There are passages in the book of Job which seem to refer to the Pyramid and its building as a symbolic representation of the earth and of its preparation for the habitation of man. I will quote Dr. Seiss's remarks on this subject:—

"The Almighty speaks to Job as if he were the identical person who had laid the measures of the Great Pyramid, stretched the lines upon it, set the foundations in their sockets,

and laid its topstone amid songs of exalted triumph. The spirit of the passage admirably interprets in this sense. The object is to convince Job of his incompetency to judge of and understand God, and the address runs as if the Almighty intended to say to him, '*You* laid the foundations of the great structure in Egypt, but where were you when I laid the foundations of the far greater pyramid of the earth? *You* laid the measures on the Pyramid in Egypt, but who laid the measures of the earth, and stretched the line upon it? *You* fastened down in sockets the foundations of the Pyramid in Egypt, but whereupon are the foundations of the earth fastened? *You* laid the Pyramid's completing capstone amid songs and jubilations, but who laid the capstone of the earth when the celestial morning stars sang together, and all the heavenly sons of God shouted for joy?' The image is unquestionably that of the Pyramid, and the appeal is best interpreted and tenfold intensified on the hypothesis that it was the builder of that Pyramid who is thus addressed."

The account given by the ancient historian of the exodus of the builders of the Pyramid from Egypt may perhaps throw some light upon those passages in Holy Scripture which speak of the migration of the "Caphtorim which came forth out of Caphtor" (Deut. ii. 23), who are called Philistines by Amos (ix. 7): "Have not I brought up Israel out of the land of Egypt, and the Philistines from Caphtor?" Caphtor, it is said, was the very region in Egypt in which the Great Pyramid stands, and these Caphtorim-Philistines were an earlier and better race than the Philistines, who were the traditional enemies of Israel in the times of the judges and earlier kings.

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## CHAPTER X.

### The Lost Door.

"A stone that may be taken out, which being raised up, there is a sloping passage to the foundations."—*Strabo.*

We have not said much as yet about the construction of the Pyramid, but as the measurements we have to deal with concern the original exterior measures of the building, it is needful to show that it was once covered, *at least in part*, with polished casing-stones. This is a fact affirmed by various historians and confirmed by the discovery in 1837, by Colonel Howard Vyse, of the corner casting-stones *in situ*, referred to in an earlier chapter.

### The Accretion Theory.

There is a theory of accretion, held by Dr. Lepsius, and some other Egyptologists, in connection with pyramid building, according to which it is supposed that the ultimate size of the

pyramid was undetermined at the outset, and that the builder began from a central nucleus and added fresh courses of masonry year by year. In this way the size of the pyramid might indicate the years of a monarch's reign. With this theory in general we have no contention, but its application to the Great Pyramid is shown to be impossible. How far this may tend towards the refutation of the theory itself is for others to show. On this point Mr. Flinders Petrie, in his book on "The Pyramids and Temples of Gizeh," says on page 165 :—

"Now, if the accretion theory were true, it ought to be of the greatest value when applied to the largest pyramids; for these are the most difficult to account for, and their extraordinary size is the main feature appealed to in support of the theory.

"Let it, then, be critically applied to the Great Pyramid of Gizeh, the largest known." After showing that the system of passages must have been originally designed, and that their construction required a base line of at least 600 feet, Mr. Petrie continues: "It is plain that the accretion theory breaks down in its application to any size under 600 feet for the Great Pyramid; and, if we are thus compelled by its arrangements to acknowledge a primary design of a base of 600 feet (which is larger than nineteen-twentieths of the other pyramids), what need is there of a theory of accretion to account for its being 750 feet?

"If we are then forced to accept the fact of gigantic primary designs for the largest pyramids (the first and the second), where is there any need of a theory to account for the far smaller designs, of very inferior workmanship, seen in the other pyramids?"

This testimony confirms the statement previously made that the Great Pyramid, which is the oldest, is the most perfect of all in its design and construction; a fact which, taken by itself, is calculated to awaken thought.

### The Casing-Stones.

Mr. Petrie speaks of the original casing-stones, and of their removal by the Arabs. "The history of the destruction of the pyramids really begins with the Arabs. They first, under Khalif Mamun, forced the great hole through the masonry. . . . After the time of Mamun the exterior was used as a quarry; the casing was apparently stripped off by Sultan Hasan for his mosque in 1356, since he is said to have brought the stone hence, and William of Baldensel in 1336 mentions both the large pyramids as being '*de maximis lapidibus et politis*'" (*i.e.*, covered, "with large and polished stones," or "with polished stones of the largest size").* Some of these stones may still be seen on the face of the second pyramid near the top.

* The Pyramids and Temples of Gizeh, p. 219.

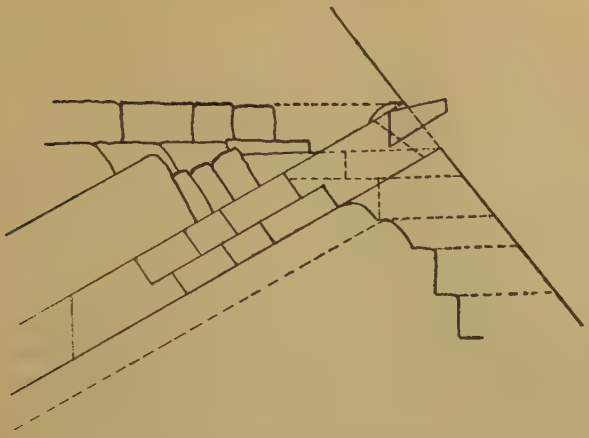
There is yet further evidence that the Great Pyramid was cased with large and polished stones in the well-known fact, stated by Strabo, that there was a closely-fitting stone door, hung on horizontal stone pivots; this stone was flush with the outside surface of the Pyramid, and yet it could be taken out and raised up so as to form a sloping passage under its inner surface. This is what Strabo says: "The greater pyramid, a little way up on one side, has a stone that may be taken out, which being raised up, there is a sloping passage to the foundations."

"This sentence," says Mr. Petrie (page 168), "is most singularly descriptive of opening a flap-door; first the stone is taken out, or lifted outwards from the face; and then, being thus raised up, the passage is opened. . . . Besides this description, there is another statement that the pyramids of Gizeh had doors, in an Arabic MS. quoted by Vyse; this was written in 850 A.D. and therefore only twenty or thirty years after Mamun had forced his way into the Great Pyramid, and thus re-discovered the real entrance."

The discovery of a doorway in the South Pyramid at Dahshur, exactly corresponding with Strabo's description of the doorway and door of the Great Pyramid, seems to complete the proof of just such a door having been used to close the Entrance Passage; and further, that that side on which the door was placed must have been finished off, at least to that elevation, with casing-stones, thus extending the solid masonry another eight or ten feet beyond the present core masonry. If one side was thus encased, it is natural to suppose that all four sides were alike completed, and that the Pyramid presented a beautiful uniform appearance, as if composed of one single stone. Mr. Petrie's description of the doorway found in the South Pyramid at Dahshur shows the arrangement for closing the Pyramid. "This formation of the passage," he says, "seems exactly adapted for a stone door, working on a horizontal hinge; the holes being for the bronze bearings of the pivot, and the cut-out of the roof being to allow the top edge of the door to rise when turning on its hinge."

Mr. Petrie gives a drawing of a door such as he supposed the Great Pyramid to have had. In the accompanying sketch this is combined with a representation of the existing courses of masonry, showing the casing-stones restored together with the ancient door and doorway as described by Strabo.

"The restoration of such a door," Mr. Petrie says, "would agree with the various historical requirements, and be in harmony with the arrangements at Dahshur. Such a block would only need a pull of two and a half hundredweight on first taking it outwards, and four hundredweight to lift it upwards to its final position. It would leave no external opening, it would also allow just half the passage to be quite clear; and, from the passage being halved in its height by two



courses at the beginning, such an opening is the most likely. Though the general form is thus indicated, the details are of course conjectural.

"To sum up: a self-replacing door, which left no external mark, is absolutely required by the fact of the Arabs having forced a passage. Only a flap-door, or a diagonal-sliding portcullis slab, can satisfy this requirement. A flap-door is unequivocally shown to have been used at Dahshur. And Strabo's description of the entrance agrees with such a door, and with no other."

Our object in seeking to ascertain the former condition of the Great Pyramid's exterior casing and doorway is to obtain, as nearly as may be possible, the measurement of the broken-off part of the Entrance Passage. This was given approximately at a hundred inches by Piazzi-Smyth. Mr. Petrie reckons it at 124 inches. On page 51 of his book Mr. Petrie says: "The original length of the Entrance Passage has not hitherto been known, except by a rough allowance for the lost casing. But, after seeing the entrances of the third pyramid, the South Pyramid at Dahshur, and the pyramid of Medum, all of which retain their casing, there seemed scarcely a question but that the rule was for the doorway of a pyramid to occupy the height of exactly one or two courses on the outside. That the casing courses were in the same level as the present core courses is not to be doubted, as they are so in the other pyramids which retain their casing, and at the foot of the Great Pyramid."

All these details of description are incorporated in the illustration, which is an attempt to present in a single view the various features of the Entrance Passage, the doorway and lost door, the casing-stones and their correspondence with the core masonry of the Pyramid.

## The Measures of Professor Flinders Petrie and of Dr. C. Piazzi-Smyth.

In seeking to trace the correspondence between the measurements of the Great Pyramid, exterior and interior, with the facts of astronomy and chronology, it is well to refer to the most recent reliable measures of the Great Pyramid, by Mr. Flinders Petrie, recorded in his book, from which we have made these quotations.

It has been all too hastily thought by some, that Mr. Petrie's measurements and calculations upset those of Dr. Piazzi-Smyth. This, however, is not the opinion of those who have carefully examined and compared the two sets of measurements, and are competent to form an opinion. I refer to such authorities as the International Institute for Preserving and Perfecting Weights and Measures; and M. Charles Lagrange, Astronomer of the Royal Observatory of Brussels, and Member of the Royal Academy of Belgium. The latter, in his book, published first in French, and translated into English in 1894,* declares that Mr. Petrie's measurements confirm his confidence in the accuracy of Dr. P. Smyth's measurements and calculations. In like manner the International Institute passed a resolution, at their annual meeting in 1883, to the effect that, after listening to a careful and elaborate examination and criticism of Mr. Petrie's work by the Rev. H. G. Wood, they were "not only strengthened in their confidence in the accuracy of Dr. Smyth's work, but *discover in Mr. Petrie's measurements the material for substantiating the confidence reposed in Dr. Smyth.*"

With the testimony of such eminent authorities as the International Institute and M. Charles Lagrange before us, we feel fully justified in using Dr. Piazzi-Smyth's measurements and calculations.

Those who wish to see this point fully discussed should consult "New Measures of the Great Pyramid by a New Measurer, described and tested by C. Piazzi-Smyth." Dr. Smyth shows that his measures of the base line of the Pyramid are in accordance with Mr. Petrie's measures and the principles of geometry. Within a few years the four corner sockets having been uncovered, it is found that the south-east corner socket is cut a few inches lower in the rock than the others, and it is shown that this is the level of the geometrical base of the Pyramid, one side of which is about 9,140 British, or 9,131 pyramid inches (a difference of one in a thousand).

One calculation will suffice to show that the architect of the Pyramid saw a connection between his work and the form and size of the earth. "The semi-polar axis of the earth is calculated at 20,854,101 feet. One ten-millionth part of this is 25·0249212

* "The Great Pyramid: by Modern Science, an Independent Witness to the Literal Chronology of the Hebrew Bible, &c. By Charles Lagrange, Astronomer, Belgium."

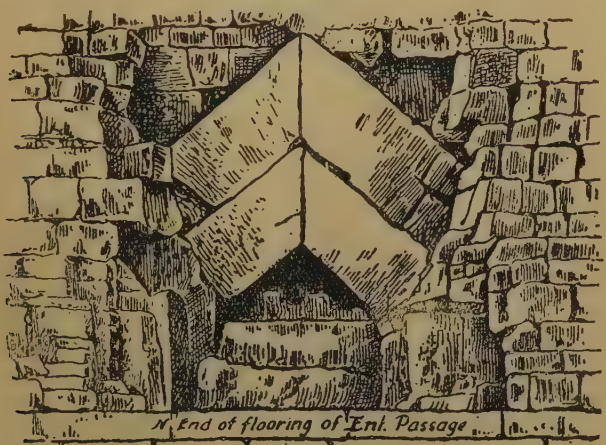
inches (British), which, multiplied by 365·24224, the number of mean solar days in the tropical year, gives 9,140·158 inches. This," says the "International Standard," "is within ·02 of an inch of the theoretical base side of the Great Pyramid, according to Dr. Smyth's computation."

Other coincidences of a similar nature are given in the "International Standard" by Rev. H. G. Wood, of Sharon, Pa., who says: "The probability that they are accidental diminishes in a geometrical ratio as the number of them increases." Mr. Wood's careful and elaborate examination and criticism of Prof. Petrie's work shows that, as happily expressed by the International Institute, Mr. Flinders Petrie "has given unwitting confirmation of Dr. Smyth's theoretical measures of the exterior of the Great Pyramid."

Dr. Piazzi-Smyth himself may well say that "the world is now getting very close to the true size of the Great Pyramid, both in its whole and its parts." He feels relieved of a weight of responsibility by the confirmation of his measurements and numbers, on which, "in every Anglo-Saxon country, colony, or community throughout the world, theories have been framed, and reliance placed upon the figures being exact to a degree far beyond anything he had ever claimed or believed."

## The "Angle Stones."

As a further proof of the correctness of the calculations based upon the geometrical proportions and measurements of the original exterior, notwithstanding its present dilapidated condition, we may refer to the remarkable "angle stones," shown in the accompanying illustration, which preserve the angle of




FRONT ELEVATION, Looking South
OF THE ANGLE STONES AND PRESENT DILAPIDATED MASONRY OVER THE ONE AND SOLE ORIGINAL ENTRANCE PASSAGE INTO THE GREAT PYRAMID

the sides of the Pyramid. The *Banner of Israel* remarks on these stones: "As though the builder had foreseen the stripping of the casing-stones, that was destined to take place in the latter days, he has provided high up above the Entrance Passage a memorial of this unique angle (the celebrated $\pi$ angle of its flanks) in the interior faces of the two inclined stones, which, as P. Smyth remarks, has been 'a riddle set up on high these four thousand years,' and only recently guessed."

In Vol. II., page 37, of "Life and Work at the Great Pyramid," Dr. Piazzi-Smyth says: "The present beginning of the Entrance Passage is an accident of dilapidation and mischievous destruction; hence, the roof ends northward at one distance, the walls extend a little further out in the same direction, and the floor a good deal further out still; the latter, moreover, bears evident markings on its surface, of the walls, and therefore the passage, having once extended along its whole length to its extreme upper or northern end. But that upper or northern end of the floor, at present, is probably short by more than 100 inches of the original surface of the Pyramid at that place." The true starting-point for linear measures must be sought, therefore, in the original geometrical surface, which, from the evidence of various kinds adduced in this chapter, appears to have existed at one time in fact as well as in mathematical theory.

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## CHAPTER XI.

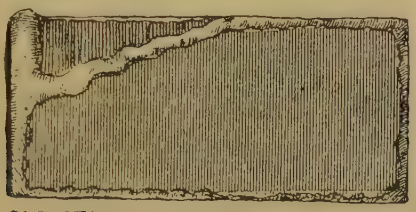
### The Coffer.

"Who hath measured the waters in the hollow of his hand, and meted out heaven with the span, and comprehended the dust of the earth in a measure, and weighed the mountains in scales, and the hills in a balance?" —Isaiah xl. 12.

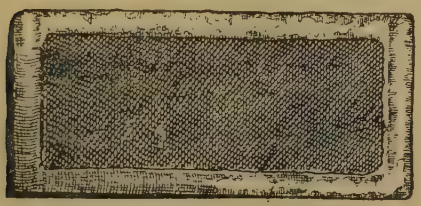
If the Pyramid is compared to a casket, then the gem it contains is the open granite Coffer in the King's Chamber. It is evident that the Pyramid was built, among other reasons, to hold this Coffer. It is the only movable thing discovered in the Pyramid, and yet it is so ponderous as to defy all ordinary attempts to alter its position; and its size is such that it is doubtful if it could now be got out of the Pyramid, and inconceivable that it could ever have been got up the low and narrow ascending passages to its present position if covered with a lid, as it would certainly have been if used to contain an embalmed body.

We must refer the reader to the works of Dr. Piazzi-Smyth and others for full details of the dimensions and proportions of this wonderful granite Coffer and of the King's Chamber in which it stands, and of the Antechamber, both on the fiftieth course of masonry; also for the measurements of the Queen's Chamber, with its wonderful niche, on the twenty-fifth course of masonry.

A few of the most prominent features and measures of the Coffer must, however, be given, in order to show that the design has nothing in it suggestive of a coffin—excepting possibly its oblong shape. Given roughly in British feet and inches, the Coffer measures seven and a-half feet outside, and six and a-half inside, in length, the sides and ends being about six inches in thickness. The breadth is two and a quarter feet inside, and nearly a foot more outside. The height from the ground is over three feet five inches, the bottom is seven inches in thickness; so that the inside depth is over two feet ten inches.



ELEVATION OF COFFER Looking West



GROUND PLAN OF COFFER

The illustration given of the Coffer shows that it has been subjected to rough usage by the Arabs, and its chipped condition makes it difficult to obtain absolutely correct measurements. The following calculations are based upon Prof. Piazzi-Smyth's measures. The Coffer contains, or was meant to contain, 71,250 cubic pyramid inches of internal space. The mass of its sides and bottom amount also to 71,250 cubic pyramid inches. The sides and bottom are, therefore, cubically identical with its internal space, and it is a perfect illustration of "doubling the cube," the exterior volume being just double the interior capacity.

Without entering into all the geometrical proportions of this wonderful vessel, we would point out the reason assigned for this particular size and measure of the Coffer. First of all, it should be remarked that the internal capacity of the Coffer itself is a fiftieth part of the cubic contents of the lowest course of masonry, forty-two inches above the floor of the King's Chamber in which it stands. It is further pointed out that the peculiar position of the Coffer in the King's Chamber suggests calculations, by means of which that Chamber may be theoretically divided

into two equal parts, the calculation giving about ten million cubic inches as the contents of each half of the room.

In an earlier chapter we have shown that the cubit of twenty-five pyramid inches, the standard of lineal measure, is exactly the ten-millionth part of the earth's semi-axis of rotation; if, therefore, we have ten million of these cubic inches in one half of the room containing the Coffer, we may expect "that something is accomplished there connected with capacity measure, depending primarily on a length of two such cubits," or fifty inches, which is the ten-millionth of the earth's axis of rotation. Dr. Piazzi-Smyth remarks that "this is decidedly the proper fraction to begin with, for capacity measure, when we have already chosen one ten-millionth of the *semi-axis* for lineal measure; the reason being that in measuring distances, say amongst the spheres of heaven, men measure from centre to centre, and, therefore, have only to take account of the radii of each; but in dealing with either their capacity or weight, we must take each sphere in its entirety."

A magnificent system of decimal weights and measures, liquid and dry, from a drop to a chaldron, and from a grain to a ton, is mathematically derived from the capacity measure of the Coffer. It is shown that the Coffer's capacity indicates the specific gravity or mean density of the whole earth—that is, the actual weight of the earth as compared with the weight of a globe or vessel of the same size, filled with water at a certain temperature. The experiments made by various astronomers indicate a specific gravity of the whole earth equal to more than five and a half times that of water; the mean result of the five most famous calculations amounts to 5·672, whilst the Coffer shows it to be 5·70, according to the calculations of Piazzi-Smyth.

The weight of the earth has been calculated to be, roughly stated, something over 5·270 trillions of tons, a number requiring eighteen additional ciphers, or twenty-two figures in all, to express it. As the weight of the Great Pyramid, after allowing for its hollow internal spaces, has been computed to be over 5,270,000 tons, it will be seen, by a simple calculation, that the Great Pyramid is, as nearly as possible, a thousand-billionth part of the weight of the earth.

We have already seen that the units of measure employed by the architect of the Great Pyramid are fractional parts of the earth's axis of rotation, and the cumulative evidence thus afforded surely warrants our believing that this unique building may have been intended, both in weight and measure, as well as in other particulars, to be a miniature model of the earth; and that it may have been designed and erected under the special guidance of God to bear a somewhat similar relation to the physical universe that the Bible bears to the spiritual.

There is surely sufficient evidence of design in the Coffer, and in the chamber and entire building containing it, to convince

the most sceptical inquirer that it was intended to serve some higher purpose than that of a mere tomb.

This appears to be indicated in the etymology of the name Pyramid, which some derive from the Greek *puros* corn, *metron* measure, and others from the Coptic *pyr* division and *met* ten. Either of these derivations may well serve to illustrate its purpose, as, by line and angle, in number, weight, and measure, are all its truths set forth. The "Encyclopædia Britannica" says that the name *pyramid* was derived from a part of the structure and mistakenly applied to the whole by the Greeks. "The vertical height was named by the Egyptians *pir-em-us*, hence the Greek word *pyramis*, pl. *pyramides* (Herod.), used unaltered in the English of Sandys (1615), from which the singular *pyramid* was formed.

### Correspondence of Coffer, Bible, and British Measures.

It is supposed that the "*quarter*" corn measure of the British farmer is derived from the Coffer, and that the Coffer itself was probably represented by the old Saxon *chaldron* as well as by the Hebrew laver, which contained four chomers or homers. There is now no larger capacity measure on the statute-book than the quarter, and it is almost precisely (but, as in the case of the inch, a fraction less) a fourth part of the capacity of the Great Pyramid Coffer.

It is clearly shown, moreover, that there is a remarkable commensurability between the capacity contents of the Great Pyramid Coffer and (1) the *Ark of Noah*, (2) the sacred *Ark of the Covenant*, (3) *Solomon's Molten Sea*, tending to show that they all probably owe their origin to the same source, and that the measurements and design of the Great Pyramid, like those of Noah's Ark, the Tabernacle and the Temple, were directly given by God Himself.

In regard to the Ark of the Covenant in the Holy of Holies in the Tabernacle, and Temple, it is shown that its capacity may have corresponded absolutely with that of the Pyramid Coffer. The measures of $2\frac{1}{2}$ cubits long and $1\frac{1}{2}$ cubic broad and high are evidently outside measures, as it is the *height* and not the *depth* which is given in the description. Reckoning the cubit as 25 pyramid inches, and allowing 1·8 inches for the thickness of the boards, the capacity would be just 32 cubic inches more than that of the Coffer; or, allowing $1\frac{3}{4}$ inches for the thickness of the sides and ends and 2 inches for the bottom, the inner cubical contents would be 37 cubic inches less than that of the Coffer. The mean of these two calculations would make the Sacred Ark only $2\frac{1}{2}$ cubic inches less than the 71,250 cubic inch capacity of the Coffer itself.

Dr. Seiss, of Philadelphia, remarks on this: "That they should be thus alike in internal measure, the dimensions of the one having been specially laid down by God Himself, is

very remarkable, and that the two should thus mutually sustain each other in the recognition of one and the same earth-commensurated cubit, is both striking and significant. Nay, using this same earth-commensurated cubit as identical with the sacred cubit, the further result appears that the Jewish laver and the Ark of the Tabernacle were the same in capacity measure with the Pyramid's Coffer, and that Solomon's Molten Sea was just fifty times the capacity of either of these." This Molten Sea again was exactly equal in its exterior cubic space with the interior cubic space contained in the lowest course of masonry of the King's Chamber (42 inches above the floor of that chamber).

It appears to be a striking confirmation of the theory of the Israelitish origin of the Anglo-Saxon race that there is such a close correspondence between the British *quarter* and *inch* with measures used in the Great Pyramid, and apparently known to the Jews and their progenitors. Piazzi-Smyth remarks: "It seems almost to imply that there was more of intercommunication in idea and knowledge between the architect of the Great Pyramid and the *origines* of the Anglo-Saxon race, whoever they were and wherever they met, than between the said architect or designer of the one Great Pyramid in Egypt and all the native Egyptian people of all the ancient ages, with their invariable 20·7 inch cubit and their false gods of their own invention."

When we come to the great "Step" at the S. end of the Grand Gallery we shall have to notice the presence of our 36 inch yard measure; also the union of the British yard and Great Pyramid cubit. This may be intended to show that there is to be a future union of the peoples using these measures, as evidently there has been a connection between them in the past. This deeply interesting subject must be reserved for another chapter.

## CHAPTER XII.

### Great Britain and Lost Israel.

Whilst it may be true that the correspondence of our British measures with those used by the builders of the Great Pyramid, the Ark, the Tabernacle and the Temple does not prove the identity of the Anglo-Saxon race and ancient Israel, it at least demonstrates some past connection between the progenitors of the Israelites and the British, who alone among the nations possessed these measures.

The separation of the Ten Tribes of Israel from Judah in the time of Rehoboam did not occur till five or six centuries after the Exodus, and more than a thousand years after the Pyramid

was built; but there was another separation or dispersion of all mankind at Babel many centuries earlier, to which the Great Pyramid appears to point. In this way it is an "altar of witness" to the unity of the human race, and has a message to all mankind, yet without an inscription in any of the languages which had their beginning at that time.

This universal message should, however, be specially prized by the Anglo-Saxon race; for the evidence of a connection in the distant past between the ancestors of the Hebrew and British peoples should add stimulus and interest to our research.

The Ten Tribes carried captive into Assyria—seven centuries before the Christian era—have never returned to Palestine; yet their return and reunion with Judah is foretold.

Has God hidden a whole nation two or three thousand years, as He hid Joseph for twenty years in Egypt? If the British-Israel theory be true, then the story of Joseph gives the nation's story in miniature. Joseph, sold by his brothers, was carried away by the Midianites into Egypt to be sold into slavery there. That was his brethren's last sight of Joseph until they saw him again after two-and-twenty years in all his glory as ruler of Egypt.

For more than as many centuries the Ten Tribes have been lost sight of, since their brethren of the House of Judah saw them carried into captivity from Samaria to Assyria. They were last seen in the position of captives; but, when again found, they should be a great nation, although during their long exile they have forgotten their own origin!

The blessings promised to Abraham, Isaac, Jacob and Joseph are being enjoyed at this day by the Anglo-Saxon race; some therefore believe, and teach, that God's faithfulness to His promise is manifested in the blessing being bestowed upon those to whom it was promised. What other people corresponds with the description, "a nation and a company of nations," "possessing the gates of its enemies," "lending to many nations and not borrowing," "the head and not the tail"?

Yet, though possessing all the promised blessings, if the Anglo-Saxon race is not lost Israel, then it must give place by-and-bye to the true Israel. But where in the world is there room, in these last times, for a great nation to be hidden?

If every link cannot be traced, yet when the two ends of a chain correspond, we can take for granted the intermediate links, as in the case of a cable under the river by which a floating bridge is worked. When we see the end on both banks, and the bridge working, what is unseen must, we know, be there.

### A Bible Riddle.

Many historical links can be traced, however, connecting the British people and lost Israel; but in the Bible, for the most part, the story is told in cryptic language; for how otherwise

could the secret have been kept? Ezekiel tells, in chapter xvii., how the word of the LORD came to him, saying: "Son of man, put forth a riddle, and speak a parable, unto the house of Israel." Now a riddle is no riddle if it can be guessed by everybody and without thought.

Our Lord explained some of His parables, and here also one riddle is explained: "A great eagle, with great wings, long-winged, full of feathers, which had divers colours, came unto Lebanon and took the highest branch of the cedar: he cropped off the top of his young twigs, and carried it into a land of traffic. . . . Say now to the rebellious house, Know ye not what these things mean? Tell them, Behold, the king of Babylon is come to Jerusalem, and hath taken the king thereof, and the princes thereof, and led them with him to Babylon."

But we are left to find out the answer to the second riddle given at the end of the same chapter in Ezekiel: "Thus saith the Lord GOD: I will also take of the lofty top of the cedar, and will set it; I will crop off from the topmost of his young twigs a tender one, and I will plant it upon a high mountain and eminent; in the mountain of the height of Israel will I plant it: and it shall bring forth boughs, and bear fruit, and be a goodly cedar: and under it shall dwell all fowl of every wing; in the shadow of the branches thereof shall they dwell."

What is the nation which most resembles a goodly cedar with spreading branches under whose shadow the fowl of every wing may dwell? This *tender twig* was to be planted in the mountain of the height of Israel—the sceptre was to belong to Judah, but the people were to be of the tribes of Israel.

Zedekiah, the last king of Judah, had *daughters* as well as sons, and we learn from Jer. xliii. 6 that the king's daughters, together with Jeremiah and Baruch, were brought into Egypt. Sacred history does not trace them farther, but tradition tells of a *princess* who came with a prophet from Egypt and established a Hebrew colony in Ireland. This beautiful princess, having become the bride of Ireland's king, became the mother of a race of Irish, Scottish, and English monarchs, thus preserving in an unbroken line the sceptre and the lawgiver of the tribe of Judah and the House of David—to remain until the great David shall come and sit upon his throne.

### PROPHECY AND HISTORY.

If God Himself had foretold that Israel should be lost, we shall look in vain for a people bearing that name and speaking the ancient language through all the ages. We know that the Ten Tribes, after being carried captive to Nineveh, escaped, and that traces of their wanderings have been discovered in tombs in the Crimea and elsewhere. Many centuries later the British Isles were invaded, and various parts were seized, by at least seven tribes of people having a common nationality, and with

one tribe among them (the English) sufficiently powerful or pre-eminent to fasten its name upon the entire community, including the previous British settlers and the subsequent quasi-conquerors, the Danes and Normans, just as Ephraim fastened his name upon the Ten-tribed nation of Israel.

The ten captive tribes of Israel are lost sight of in Media, between Nineveh and the Caspian, soon after 721 B.C., and in that very Media, Sharon Turner, in his history of the Anglo-Saxons, found a people about 700 B.C. whom he claims to be the ancestors of the British. He acknowledges that Media was not their cradle, but where they came from he could not tell. *Where Israel is lost, there the Saxon is found.* Both the time and the place are in accord, and, though we cannot see the connection, it seems as real as that of a stream disappearing beneath the sand and reappearing at another spot a little lower down. Green's "History of the English People" traces them to the same region as does Sharon Turner.

The Great Pyramid led me by degrees, and at first with some reluctance, to study the British-Israel problem. Whilst not for a moment supplanting the Gospel, the subject is worthy of examination and may be tested by its fruits.

### Jacob's Blessing to Joseph's Sons.

Confining our research to Bible evidence, let us examine Jacob's blessing to the sons of Joseph. The story is very beautifully told in Genesis xlviii., and is referred to in Hebrews xi. 21, where both A.V. and R.V. insert in italics the word "*leaning*," which is not in the original text. The narrative tells us that Jacob crossed his hands to lay his right hand on Ephraim's head, and his left hand on the head of Manasseh. He could not then have had a staff in his hand, or been *leaning* on one. But there is far more of beauty in the story. The aged patriarch was shown in vision the future glory of his beloved son Joseph, as represented in the two tribes of Ephraim and Manasseh. The staff was the tribal rod of Joseph, the top of which was so high that the old man's heart was filled with pride and joy, and he devoutly worshipped God. Imagine his seeing Ephraim as now represented by the Union Jack, and Manasseh by the Stars and Stripes, and the patriarch's wonder and worship is explained.*

* Wilson's "Emphatic Diaglott" gives this note on Heb. xi. 21. "According to *Sampson*, this sentence may be translated—'and rendered worship (to God) on account of the height of his (Joseph's) ensign.' He contends that *rabdos*, a rod, also means ensign, because according to Num. vii. twelve rods were to be borne by the twelve princes of Israel with the names of the tribes written thereon, as ensigns. *Akron* means top, summit, height; and *epi* with an accusative he would render, on account of, or in respect to. The patriarch Jacob, then, 'worshipped God on account of the height of Joseph's power,' when he with prophetic vision saw the future greatness of Ephraim and Manasseh."

## A Nation Bringing Forth the Fruits of God's Kingdom.

One more Bible reference must bring this chapter to a close.

Any British-Israelite worshipping in the Church of England on the evening of 9th August, 1914, which was the ninth Sunday after Trinity, must have been struck by the reading of 1 Kings xi. 26—43 as the alternative first lesson, and Matt. xxi. 23—46 as the second lesson. Only when the ninth Sunday after Trinity falls on the 9th of August are these two possibly united.

The Old Testament reading tells of the Prophet Abijah putting on a new garment, and then, finding Jeroboam, rending his new garment into twelve pieces, and giving ten of the twelve to Jeroboam, with the words:—"Take thee ten pieces; for thus saith the Lord, the God of Israel, Behold, I will rend the kingdom out of the hand of Solomon, and will give ten tribes to thee. . . . Howbeit, I will not take the whole kingdom out of his hand; but I will make him prince all the days of his life. . . . But I will take the kingdom out of his son's hand, and I will give it unto thee, even ten tribes."

Thus was decreed the division of Israel and Judah; and the kingdom was taken from Rehoboam and given to Jeroboam—all but Judah and Benjamin.

An almost identical sentence was pronounced on the Jews by our Lord in the New Testament lesson, "Therefore I say unto you, The kingdom of God shall be taken from you, and given to a nation bringing forth the fruits thereof."

This has as certainly been done as was the taking of the Ten Tribes from Rehoboam. Has the kingdom of God been given to the same Ten-tribed nation of Israel? If not, where is the nation which is "bringing forth the fruits" of the kingdom more plentifully than the Anglo-Saxon race—with all its faults—is doing at this day? *

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* Whilst this is passing through the press, news comes of Jewish refugees from Palestine now in Egypt, preparing for military service under the British flag. The words of command are given in Hebrew, and in addition to the British military tokens the men wear the little "Magan David"—shield of David—denoting Zionists. The colonel of the regiment is a confessed lover of the chosen nation. His address to the battalion—translated into Hebrew—ends with these words: "Pray with me that I should not only, as Moses, behold Canaan from afar, but be divinely permitted to lead you into the Promised Land."

Is not the House of Judah walking to the House of Israel? (Jer. iii. 18).

# CHAPTER XIII.

## Harmony of Bible and Pyramid Chronology.

In the chapter on Astronomy having established the year-inch principle in regard to the base and diagonal measures of the Pyramid, it is not surprising to find that the same key unlocks the mysteries of the passages within.

Evidence has been adduced showing that originally the outer surface of the Great Pyramid extended from eight to ten feet farther than it does at present, the casing-stones and the door having been removed. In measuring the Descending Passage, therefore, we must make allowance for the missing portion—say from 100 to 120 inches.

The measurements of the Pyramid may all be calculated from the centre; from the centre to the apex gives the sun-distance, and this same measure (from centre to apex) is the radius of a theoretical circle symbolising the year; from the centre to the four corners shows the true size and shape of the edifice, and gives in inches the number of years in the precession of the equinoxes, and so on.

Chronology, in like manner, is most conveniently calculated from its central point—viz., the birth of Christ—and by starting there we can refer to the B.C. and A.D. dates in common use.

The diagram giving the vertical section of the Great Pyramid clearly shows the central point of its passage system. At the beginning of the Grand Gallery all the passages concentrate. From that point you can ascend to the King's Chamber, descend to the Entrance Passage, go along the Horizontal Passage to the Queen's Chamber, or descend by the shaft to the Grotto and Subterranean Chamber. We naturally, therefore, fix upon that point as furnishing a zero starting-point for all calculations backward and forward.

Taking, then, the beginning of the Grand Gallery as indicating the beginning of the Christian era, and measuring first backward towards the entrance, we find that a distance of 1,542 inches brings us to the junction of the Descending and Ascending Passages, which corresponds closely with the B.C. 1540 date connected with the Exodus of Israel from Egypt and the giving of the law upon Mount Sinai.*

Proceeding backward to the entrance, we find 985 inches brings us to the broken end of the passage, to which at least a hundred inches must be added to arrive at its original measure. Here a peculiar feature is noticed—viz., that in this place alone in all the passages of this height, two stones are used instead of one in the wall masonry. This doubling of masonry courses is supposed to indicate that the measures of this part of the passage

* See Chronological Table in Appendix.

must be doubled. Of the part still remaining, 215 inches are so doubled, and it is evident that this doubling was continued to the entrance (see diagram on page 43, showing original design), so that we must add 200 instead of 100 inches for the broken-off part, as well as the 215 inches of the existing upper course of masonry, to the 985 inches of the broken floor to arrive at what appears to be the indication of the earliest event of which any definite measure is given in these passages.

Adding together 985+215+200 as above, we have a total of 1,400 inches, to be added to the previously ascertained 1,542, making in all 2,942. Turning this into so many years B.C., we find it is only ten or eleven years earlier than the time of the division of the earth, which apparently synchronised with Peleg's birth in B.C. 2931. The Dispersion was somewhat earlier than the division of the earth referred to in Gen. x. 25; if about ten years earlier it would exactly correspond with the B.C. 2942 calculation above. But it must be remembered that we have no precise measurement of this broken-off portion of the Entrance Passage, and that Prof. Petrie's measures would give us twenty inches more.

The Dispersion must have occurred after the death of Noah, and before the birth of Peleg, which two events are separated by a period of fifty years; thus Noah died B.C. 2982, and Peleg was born B.C. 2931. From the Flood to Noah's death was 350 years, or 400 to Peleg's birth, and by that time we can conceive that the population was sufficient to attempt to build the tower of Babel, and to be scattered by families into different parts of the world, which manifestly would not have been the case in the hundred years allowed by the shorter chronology of the Hebrew text from the Flood to the birth of Peleg. Moreover, we can hardly conceive that Noah would defy God by taking part in building a tower for a rallying point to keep the people together, when God had bidden him to replenish the earth.

The Dispersion dates from the building of the tower of Babel. God overthrew the attempt to found a universal kingdom in opposition to His command. Babel, or confusion, is the certain result of every such attempt. Yet, though God scattered mankind, He did not forsake them, and would not have them forget that they are one race and "made of one blood." In the Great Pyramid, which has been called the "Tower of Egypt," we appear to have God's answer to man's tower of Babel. Here, in a central part of the earth, where three continents meet, is a building which is in Egypt, but is not of Egypt; which has no inscription in any language to make it the property of any nation or people, yet which, by its own appropriate measures and symbolical teaching, may be said to be a witness to all nations of eternal truths connected with the physical and spiritual worlds—either discovered by man, or revealed to him.

Most writers on the Great Pyramid have sought to make it show a date for the Deluge in harmony with the chronology of the Hebrew text. I believe they have erred through beginning with a theory and then seeking to harmonise facts with it.

It is startling to find that some who accept the astronomically ascertained date of the Pyramid's erection, B.C. 2200 to 2170—when it is supposed to have been completed—still cling to a date of a universal deluge scarcely 150 years before the building began!

Is it conceivable that in so short a time the eight persons in the Ark would have become so great a multitude as to build the tower of Babel, and after this to be dispersed and become many nations, one of which could alone provide 100,000 *men* to do nothing else than build the Pyramid! Why not then give a fair examination to the claims of the longer Septuagint chronology, which provides over a thousand years' interval between the Deluge and the Pyramid? This is about eight centuries more than the Hebrew chronology allows; and the difference in the two systems to the time of Adam amounts to over 1,500 years!

It ought to be known to all Bible students that the Septuagint Greek text of the Old Testament is quoted in the New Testament more often than that of the Hebrew. Peter's quotations on the Day of Pentecost are given from the Greek text almost verbatim, and our Lord Himself quoted the Septuagint, which was at that time in common use.

No motive explains the corruption of the text in regard to dates except that attributed by the early Fathers of the Church to the unbelieving Jews of the 2nd century—viz., that of abbreviating their chronology in order to show that the time for the Messiah's advent had not yet arrived. The original expectation was that as Adam had been made on the sixth day of creation, so the Messiah would appear in the course of the sixth *day of a thousand years*. Christ was born more than 5,500 years after the creation of Adam according to the longer chronology.

We do not need to be told by the Pyramid the date of the Deluge. If we can find out, even approximately, the date of the Dispersion, then the date of the Deluge, and even of the creation of Adam, will be apparent. The manifest manipulation of the dates extends to four generations after Peleg, and if the principle of interpretation so far back can be discovered, we have only to apply that same principle to the antecedent periods in order to ascertain the dates of man's first appearance and of the universal deluge.*

* See Chronological Note and Tables in Appendix.

## CHAPTER XIV.

### Sacred Symbolism.

"When these things begin to come to pass, look up, and lift up your heads because your redemption draweth nigh."—Luke xxi. 28.

While Piazzi-Smyth was carrying on his measurements at the Great Pyramid at the beginning of 1865, the sheriff-clerk of the county of Edinburgh sent him a letter from a young ship-builder at Leith, Robert Menzies, who from childhood upward had been an earnest student of whatever could be procured concerning the Great Pyramid. He had been led by a careful perusal of Mr. John Taylor's and Dr. Piazzi-Smyth's books to entertain a very serious view of the purpose of the Great Pyramid. This was nothing less than the belief that the descending and ascending passages traced the course of human history, and set forth the Divine purpose, and the time appointed, for each dispensation.

Robert Menzies died in 1877, but others have developed the thought which he was the first to express. In his opinion, the descending Entrance Passage is typical of the dispensation after the Flood, when men, following their own inventions, and rejecting the patriarchal worship of the one true God, began their descent to the depths and abominations of idolatry; pursuing a course which could only end in the bottomless pit, represented by the Subterranean Chamber, deep down in the rock under the very centre of the Pyramid, and without any finished floor, or bottom.

### Symbolism of the Subterranean Chamber.

This Chamber, 46 feet long and 28 feet broad, is remarkable on account of its being the only part of the building left unfinished. It should have been the very first thing finished in the whole Pyramid according to the theory of Lepsius, if intended for a tomb.* The ceiling, indeed, is well finished and smooth, but the floor varying from 4 feet to 13 feet in depth, was left a lamentable scene of holes, rocks, and up and down fragmentary confusion.

Verily (seeing that the whole light of day was reduced down there to a mere starlike point at the upper end of the long Entrance Passage, of nearly 340 feet), it was a locality answering to "the stones of darkness and the shadow of death" of which Job spoke (xxviii. 3).

This partly excavated, and, so to speak, bottomless rock chamber is about 100 feet vertically under the centre of the base of the whole monument.

* Lepsius' "Law of Pyramid Building," as it has been called, that the size of the Pyramid depended on the duration of the builder's life—each course of masonry representing a year of the Monarch's reign—has been refuted by Professor Flinders Petrie so far as the Great Pyramid is concerned, as explained in an earlier chapter.

The whole length of the Descending Passage is something over 4,400 inches, of which over 3,200 are driven through solid rock. The last 324 inches of this passage being horizontal would make it absolutely impossible to see any star from the Subterranean Chamber itself. The merely astronomic theory, therefore, must be abandoned as absolutely as the tomb theory.

It is evident that in order to finish the side walls, and especially the roof, the workmen must have carried out their task in a most constrained and awkward position, including that of lying on the back while at work. The unfinished and chaotic condition of the bottom therefore can only be the result of *deliberate design*, and it seems well calculated to typify what in the Bible is called the " bottomless pit " or the " pit of destruction."

Another unexplained and curious feature of this part of the Pyramid is a passage of very contracted dimensions penetrating to a distance of 50 feet from the further wall, leading nowhere and ending in nothing. This abortive passage, roughly $2\frac{1}{2}$ feet wide and high (31 inches by 29) may be found to have some symbolical meaning. It serves no purpose and must have been most painful to construct.

Every preconceived notion seems contradicted in this part of the building. If intended for a chamber from which to view the heavens, would it have been removed from the point of observation by a horizontal passage of nearly thirty feet? If intended for a tomb-chamber, why were all the laws of building and excavation reversed? Would not workmen naturally work so as to give themselves standing room? Why should the full size be excavated from above with so much care, and a boring be made another fifty feet into the rock, before the chamber was adapted to any purpose? The only conclusion we can arrive at is that *the confusion itself is designed;* and this becomes more striking as we contrast it with the perfection of execution and design in other parts of the building.

Does it not seem as if the ascending and descending passages are an illustration in stone of the Bible declaration of the two ways—the upward and the downward—the way of life and the way of death? (Rom. vi. 23; Matt. vii. 13, 14).

### The Grand Gallery.

After proceeding a distance of nearly a thousand inches from the present entrance, the descending passage is arrested by the first ascending passage, which measures 1,542 inches, and closely corresponds with the duration of the Mosaic dispensation, from the Exodus to the birth of Christ. The elevation of the people of Israel by the giving of the Law upon Mount Sinai is well represented by an Ascending Passage, though it is still low and narrow, and evidently only a preparation for something better. It is in the Grand Gallery, which appears to typify the

Christian dispensation, that for the first time within the Pyramid there is sufficient height for a man to stand upright.

In the measures of the Grand Gallery we have to do with unfulfilled prophecy, and it is in this part of the Pyramid that the interest culminates. In continuing our enquiry it is well to remember that much of what we may interpret in the light of past history was future at the time the Great Pyramid was erected in B.C. 2170. If it has already proved itself a true prophet in regard to the duration of two past dispensations and the commencement of two others—viz., *the Mosaic*, clearly marked by the giving of the law on Mount Sinai, and *the Christian*, still more clearly defined by the birth of the Saviour of mankind—is it not reasonable to expect that it will prove a true witness again in regard to the close of the present dispensation of grace?

Now, here it is very remarkable that the Grand Gallery, on account of its peculiar construction and great height of 28 feet (the passages leading to it are barely 4 feet high), and the presence of a great step, 36 inches in perpendicular height, at the extreme end of the Grand Gallery, offers greater difficulty than any other part of the building to the measurer.

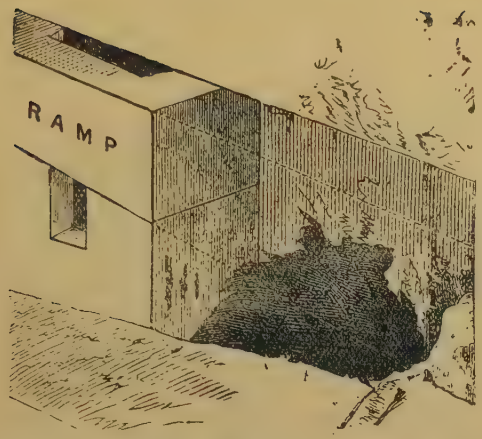
The late Colonel Senior showed *nine different ways* of measuring the Grand Gallery. This confirmed his faith in the prophetic character of the Great Pyramid, because, like the Bible, it seems to conceal the *precise* date of the end, "For of that day and hour knoweth no man"; whilst there are indications of the approximate period, and "signs of the times," that that day should not overtake us unawares (1 Thess. v. 4, 5; Mark xiii. 28—30).

### The Descending Shaft.

Before proceeding, however, to examine the length measures of the Grand Gallery, and the peculiar features of its termination, or development, we should look at the striking symbolical representations found at and near the commencement of this passage, which we have seen reason to believe indicates the date of Christ's birth and the beginning of the Christian dispensation.

Near the beginning of the Grand Gallery the absence of one of the Ramp-stones, as shown in the accompanying illustration, discloses a "well," or more properly a descending shaft, shown in the diagram giving a vertical section of the Pyramid.

This abysmal shaft, of very small bore, descends first almost perpendicularly into a kind of grotto in the natural rock (which here rises up into the solid masonry of the Pyramid) and then continues its descent in a somewhat slanting direction through the rock, till it finally emerges in the deep and dismal descending passage just before it passes into the Subterranean Chamber, symbolising the bottomless pit, some 180 feet below, in the living rock.




No trace of "the missing Ramp-stone" is now to be found, but the descending shaft or "Well" thus revealed must have been part of the original design.*

Here we seem to have set before us the most solemn and wonderful event that has ever taken place in the history of mankind—*the death and resurrection of our blessed Lord;* for, measuring from the commencement of the Grand Gallery along the line of the floor on its west side, a distance of 33 or 34 inches (just the number of years of our Saviour's earthly life), we come right over against the centre of this *sepulchral-looking aperture*, where part of the floor and wall must have been torn away, leaving exposed the mouth of this gaping tomb.

We have, then, in a parable of stone *the date of Calvary* in our Lord's history, His burial in the tomb, and descent into Hades—represented by the natural Grotto in the rock. While His glorious resurrection is set forth by the stone that once covered the entrance to that sepulchral shaft, having been burst out or rolled back with triumphant power from its mouth, indicating how totally unable the grave was to hold Him beyond the appointed time.

This wonderful sepulchral aperture, communicating as it does with the long descending passage just before it ends in the subterranean chamber, seems, like the Bible, to point to Christ as "the Saviour of the world." His death has opened the way of salvation for all, to prevent any human soul being necessarily lost. For from the very gate of that dismal abyss there is a "strait and narrow way," leading right up to the Grand Gallery —the way of salvation open for all who will.

*After the closing of the ascending passage by the portcullis blocks, which then formed the roof of the descending passage, this shaft would have been the only means of exit for those who remained in the Pyramid in order to lower those blocks into position.

"Then He is gracious unto him, and saith, Deliver him from going down to the pit. I have found a ransom" (Job xxxiii. 24).

### Queen's Chamber and Horizontal Passage.

Before leaving this part of the Grand Gallery, we must notice the "Horizontal Passage" running underneath it till it reaches the so-called "Queen's Chamber." The length of this passage is 1,518 Great Pyramid inches, and during one-seventh of its length from the commencement it is open to the Grand Gallery, then for five-sevenths of its course it is of the same dimensions as the first ascending passage—viz., 47 inches high by 41 wide, while during the remaining seventh of its length at the end, there is a drop in the floor of 20 inches, making the height of it at this part of its course about 67 inches. The floor of this passage during its entire length, as well as the floor of the Queen's Chamber, has been left rough and unfinished, unlike any other passage floor, and evidently meant to be so for some symbolical teaching (perhaps to indicate that the year-inch measurement does not apply to this particular passage). From the walls and ceiling of the passage and from the Queen's Chamber there is a thick incrustation of salt, which is constantly exuding in sparkling crystals.

Here we appear to have placed before us in symbol the setting aside of the Jewish nation during the whole of the present Christian dispensation, but *only during that period*, as the south wall of the Queen's Chamber, at the end of this passage, is in a direct vertical line with the south wall of the Grand Gallery.

In addition to this it has been suggested that the salt found in this particular part of the building may be typical of the unchangeable purpose of God towards His ancient people and of His everlasting covenant with them, His "covenant of salt" (Num. xviii. 19), "a sign and a witness that the Lord God of Israel gave the kingdom over Israel to David for ever, to him and to his sons by a covenant of salt" (2 Chron. xiii. 5).

From the fact that the south wall of the Queen's Chamber ends in a direct vertical line with the south wall of the Grand Gallery, it would appear probable that the Jews will be restored as a nation to their own land at the time indicated by the termination of the Grand Gallery.

May we compare this horizontal passage to a siding into which a train is shunted till it can go on the main line? The Jews *as a nation* missed the main line of the Grand Gallery by their rejection of their suffering Messiah. As individuals, Jews, equally with all others, may now travel along the main line of salvation through faith in the Lord Jesus Christ, and the time appears to be at hand when, on His return in power and great glory, the Jewish nation will say, "Blessed is He that cometh in the name of the Lord."

## CHAPTER XV.

### Prophetic Symbolism.

### The Great Step and the Year 1882.

Up to the measure of 1,813 inches of the Grand Gallery we have an *ascending* floor line to measure, then the Great Step thirty-six inches high, and then a level passage of sixty-one inches.* From the top of this Step the floor is level all the way to the King's Chamber, though before that is reached one has to pass through a low passage (of fifty-three inches in length), and then through an antechamber and another low passage, which like the other is only forty-four inches in height. All this shows that the "end of the world" is not to be expected when the Grand Gallery ends, although some sort of change appears to be indicated.

One method of measuring the length of the Grand Gallery is to ignore the Step, adding to the 1,813 inches of ascending floor sixty-eight and a fraction, which at the same angle would bring a line continued through the Step to the intersecting south wall, or termination of the Grand Gallery.

By measuring over the Great Step we obtain the following result: 1,813 + 36 (height of Step) + 61 (level passage) = 1,910. By measuring through the Step in continuation of the Grand Gallery's floor line we get: 1,813 + 68·6 = 1881·6 inches or years; that would be about or just beyond the middle of the 1882nd year of the Christian era.

Now has any event happened about the middle of 1882 worthy of being foretold in the Great Pyramid? Certainly, one very notable event in connection with Egypt itself did take place at that very time; for the bombardment of Alexandria on July 11th, 1882, by the British fleet, was not a simple battle or campaign; it was the death-knell of Turkish rule in Egypt, for "*what Turkey loses she does not recover.*"

I do not venture to assert that the Great Pyramid foretold the British occupation of Egypt in 1882; but the coincidence is the more remarkable as the importance of this event as a step in the fulfilment of prophecy was recognised, at the time of its occurrence, by students of prophecy. Dr. Grattan Guinness wrote an article of great interest showing that this stroke had fallen upon the Mahommedan power precisely the prophetic period of 1,260 years, to the month if not to the day, after the foundation of the Mahommedan era *from the date of the Hegira*, A.D. 622. This is the period of 1,260 years variously described as 1,260 days; 42 months; time, times, and half a time; in the Book of Daniel

* The British yard measure is found in the height of the Step, and the union of the British yard and Pyramid cubit in the sixty-one inches of the Step's surface (36 + 25 = 61), reminding us of the union of the Two Sticks representing Judah and Ephraim (see Ezek. xxxvii. 15–28).

and Revelation. Just as we have *a day for a year* in the Book, we have *an inch for a year* in the building.

### "An Uninterpreted Sign."

A remarkable confirmation of the year-inch theory of interpretation of the Pyramid's passages is found in the "uninterpreted sign," noticed in 1865, and recorded in "Life and Work at the Great Pyramid" (Vol. III., p. 310), published in 1867; but of which Dr. Piazzi-Smyth did not know the significance till his attention was specially called to it in 1872 by Mr. Casey, the author of "Philitis," one of the first and most useful of the smaller books on the Great Pyramid.

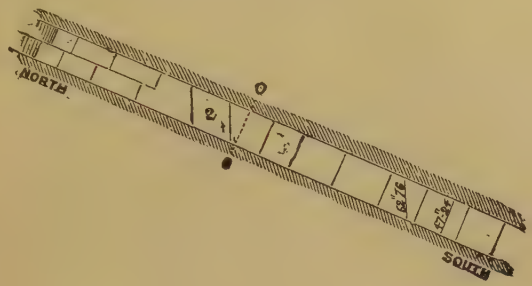
Mr. Casey had, in correspondence with Dr. Piazzi-Smyth, expressed his conviction that notwithstanding all that had been written as to the metrology of the Great Pyramid being more than human scientific perfection for the age in which it was produced, yet to call it, therefore, divinely inspired or sacred, seemed to him either too much or too little.

"It might have been sufficient in a previous day, but not in these times in which we live; for with rationalism continually extending on every side, the only vital question left in religion, the only question really sacred is, 'What think ye of Christ?' the question to which we must all of us, sooner or later, come at last." "Now," said Mr. Casey, "unless the Great Pyramid can be shown to be *Messianic*, as well as fraught with superhuman science and design, its *sacred* claim is a thing with no blood in it."

He argued very forcibly that if the first Ascending Passage was truly intended to indicate prophetically the time from Moses to Christ, and the Grand Gallery the Christian dispensation, it was hardly conceivable that the builder, if really inspired from on high, should not have known, and in some way recorded, the interval that was to elapse from the date of the structure to the greatest of all events in human history, the birth of the Saviour of the world.

The Great Pyramid's own memorial date of erection being astronomically determined by the angle at the Entrance Passage, pointing to the then polar star in or about B.C. 2170, Mr. Casey inquired whether there was any special feature at that number of inches back from the commencement of the Grand Gallery. The Astronomer Royal examined his orignal notes and soon saw that the 2170 B.C. date would fall very near a most singular portion of the passage—viz., a place where two adjacent wall-joints on either side were almost *vertical;* while every other wall-joint both above and below was *rectangular* to the floor of the passage. Neither of these quasi-vertical joints, however, would exactly suit the 2170 B.C. date—they were too early. But there was on the surface of the stone following the last of them *a more unique marking* still. The mark was *a line*, nothing

more, ruled on the stone from top to bottom of the passage wall at right-angles to its floor—such a line as might be ruled with a blunt steel instrument, but by a master hand for power, evenness, and straightness, and exquisitely true. There was such a line on either wall of the passage, and the two lines seemed to be pretty accurately opposite each other.




These lines had been seen and admired and written about; yet when Mr. Casey after the lapse of several years required to know exactly where in the descending Entrance Passage the line on either side touched the long floor plane, there was no exact record.

Under these circumstances Dr. Smyth wrote to Mr. Waynman Dixon, C.E., then at Cairo, requesting him to make and send to him careful measures of the distance of the fine line on either passage wall from the nearest of the two quasi-vertical joints; not giving him any idea what the measure was wanted for, but only asking him to be very accurate. Mr. Dixon and Dr. Grant of Cairo both made careful measures, and their doubly attested figures were sent on diagrams, in a manner which left no room for misunderstanding.

It was now only necessary to deduct these measures from the distances of the nearest joints previously determined. "And I was almost appalled," says Piazzi-Smyth, "when on applying the difference, the E. side gave forth 2,170·5 and the W. side 2,170·4 inches." *

Mr. Casey wrote, on hearing the result, "*This testimony satisfies me, and fills me with thankfulness and joy.*"

* It should be noted that Mr. Flinders Petrie gives nearly three inches more for this measure and nearly one inch more for the 1882 measure already spoken of. On this Dr. Smyth remarks that his *angular* measures of the passages are left very nearly intact, and that a small error is found in the *linear* measures, which is attributed to the use of loose rods on the sloping floor surface of dark passages. Mr. Petrie used a steel tape in taking these measures. Without questioning the correctness of Mr. Petrie's measures, Dr. Smyth says that the 2,173 inches may be just as readily adopted as the 2,170 for any purpose he has used the latter for; and that some may have relied on his figures being exact to a degree far beyond anything he had ever claimed or believed.

Here, therefore, by this previously uninterpreted mark or sign (1) *the date of the Great Pyramid's erection*, as astronomically calculated by the angle of the Entrance Passage, *is confirmed* and (2) a *Messianic reference* of the most remarkable and convincing character *is established.*

This mark was the first thing I looked for on going inside the Pyramid; and on entering the dark Descending Passage I took the candle from the Arab attendant whilst I looked for and examined, and made my companions witness, these marvellous lines. I like to picture the hand of the great architect holding the chisel and putting that *seal*, as it were, to his great work, and I confess to a feeling of veneration for the Master-mind which directed every detail of that vast construction.

### Upper and Lower Exits from the Grand Gallery.

Arriving at last at the south, or far end of the Grand Gallery, we see that it points not only to an end, but to a new beginning. It is a passage leading to chambers, both above and below. It is thought, indeed, that another chamber, and perhaps the most important, remains to be discovered.

Among the chips and splinters of stone near the Pyramid were found frequent splinters and fragments of green and white *diorite.* As this stone must have been brought from far, and nothing constructed of it has yet been found inside the Pyramid, Piazzi-Smyth says, "I was compelled to gaze up at the Pyramid with its vast bulk, and believe that there is another chamber still undiscovered there, and one which will prove to be the very muniment room of the whole monument." *

On the floor level of the Great Step of 36 inches, at the end of the Grand Gallery, there is a *distressingly low passage* 43·6 inches high and 41 wide, while overhead at the upper S.E. corner of the Gallery, 28 feet from the floor, far above the heads of all travellers below, and utterly beyond the reach of any but winged beings, is a *small concealed passage-way* leading to a sort of sanctuary over the ceiling of the King's Chamber, evidently not fitted for persons with ordinary powers of locomotion, as the floor is all up and down in huge knobs of granite, and the height too small; but the ceiling is exquisitely smoooth and true in

* Reference is made in "Life and Work at the Great Pyramid" (Vol. I., p. 365, and Vol. II., p. 100) to the granite leaf and boss as perhaps indicating the entrance or passage to this *undiscovered chamber.* "The granite leaf, though small compared with the principal stones about it, is yet not formed of one piece but of two, one placed above the other, and the upper with a very curious and unique adornment—the boss—looking like a handle whereby to pull the upper half of the granite leaf upwards in its grooves, and perhaps disclose a small hollow space containing the key of the whole Pyramid. The grooves for sliding the block upward are open, smooth and ready for such a movement; but the blocks themselves are cemented into their places."

polished red granite, and of the same length and breadth as the ceiling of the King's Chamber below.*

To the Scripture student the symbolical meaning of all this is soon apparent. The Lord Jesus has set before His redeemed people one hope, the bright and glorious expectation of His return. "I will come again and receive you unto Myself."

"The Lord Himself shall descend from heaven with a shout, with the voice of the archangel and with the trump of God: and the dead in Christ shall rise first: then we which are alive and remain shall be caught up together with them in the clouds, to meet the Lord in the air; and so shall we ever be with the Lord." This is "the blessed hope" for which we are taught to look, "even the glorious appearing of the great God and our Saviour Jesus Christ."

How soon this glorious event may occur we know not, but we have certain indications given us in the Word of God whereby we may know that "it is near, even at the doors," and these indications seem to be now thickly gathering around us. The Great Pyramid, like Scripture, seems purposely to leave the exact date uncertain, that we may be always watching, whilst the *impending* wall and upper exit passage set forth as plainly as can be set forth in stone that the next great "impending" event for the Church of Christ is His descent into the air to raise His sleeping saints, and change His living saints, and receive them together to Himself, as symbolised by the secret way of escape leading to the retreat over the King's Chamber.

But, while the Lord's people are to be caught up to meet Him in the air, what is to happen on earth at that time? Then is to come a time of tribulation, represented by the very low exit passage at the end of the Grand Gallery, which is lower than any of the low passages which marked the troubles of the profane or Jewish world in early times.

### Antechamber and King's Chamber.

This low exit (of 53 inches in length) should probably be regarded rather as a doorway than as a passage for any time measurement, and it leads immediately into the "Antechamber," which apparently symbolises the *millennium*, or thousand years' reign of Christ with His saints. But this period or state, however glorious, will not be the final, perfect, and eternal state which may be symbolised by the *King's Chamber*, which itself also has to be reached by an equally low passage or doorway (of 100 inches). This last low passage may represent the time of

* There are five small chambers, called "Chambers of Construction," discovered by Davidson in 1764. From an architectural point of view they are thought to be intended to relieve the flat roof of the King's Chamber of the weight above, and they may serve such a purpose and at the same time have a symbolical meaning in harmony with the general design.

Satan's final attempt against God when he is loosed out of his prison for a little season (Rev. xx. 3, 7—10), after which he is "cast into the lake of fire and brimstone," and those who are deceived by him devoured by fire from God out of heaven (Rev. xx. 9).

The twentieth chapter of Revelation, in which the Millennium or thousand years' reign of Christ is described, speaks also of the judgment of the "great white throne," when the dead, the great and the small, stand before the throne, and books are opened, "and the dead were judged out of the things which were written in the books, according to their works."

Seeing that this judgment scene appears to be symbolised by the granite Coffer in the King's Chamber, it may be questioned if that chamber itself does not represent the hall or throne of judgment, rather than the eternal glory, which may possibly not have any material symbol in the Pyramid, unless it be in the supposed undiscovered chamber.

The accompanying diagram illustrates the end of the Grand Gallery with its step, and lower and upper exits, the Ante-chamber, showing the granite leaf and boss, the King's Chamber with the Coffer, and the so-called Chambers of Construction above.

The granite Coffer in the King's Chamber, which has been fully described in Chapter XI., seems then—

(1) By its shape, or sarcophagus form, to symbolise *death.*

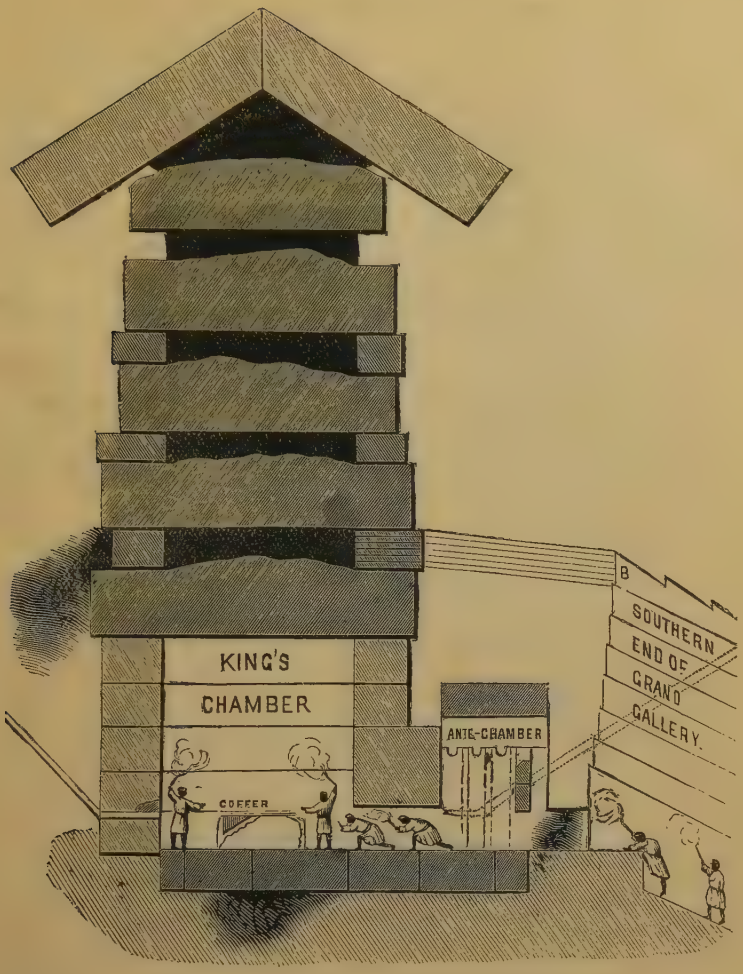
(2) By its being open, to represent *resurrection.*

(3) And by its wonderful capacity and measurements, with their evident relation to earth measures and density, to say, "after death the *judgment.*"

Possibly some to whom this subject is new may think some of our conclusions fanciful; but unless it can be shown that the coincidences referred to do not exist, or unless some other explanation of them can be given, the Great Pyramid has a message to which we shall be wise if we give heed. As Piazzi-Smyth has said:—

"Science is there, but almost solely, as it would now seem, to prove to these latter scientific days of the earth that the building so designed in the beginning of the Noachian world, when human science was not, has now a right, a title, an authority, to speak to men of these times, and even to the most scientific of them, on another and far higher subject; or of things unseen, yet quick and powerful, piercing even to the dividing asunder of the soul and spirit, and discerning the thoughts and intents of the heart."

I have by no means exhausted the wonders and lessons of the




Great Pyramid. I have sought to present what is of most general interest and importance. Among other topics which might have been considered is the "corner-stone," itself a true pyramid, and uniting, as it were, every stone in the whole building (see Ephes. ii. 20—22; Job xxxviii. 6; Zech. iv. 7; Acts iv. 11, etc., etc.).

The city seen in vision, and described by St. John in Rev. xxi., is generally thought to have been of the form of a pyramid. Jacob's vision of the ladder upon which angels were seen ascending and descending is also thought to have been of this form. And though the tower of Babel was doubtless of a totally

different pattern, this "tower of Egypt" from all its sides points to heaven.

Reference might have been made to the signs of the Zodiac and to Alpha Draconis, the star which once dominated the Entrance Passage, being in the tail of the constellation of the dragon or serpent referred to in Job xxvi. 13, "By His spirit the heavens are garnished; His hand hath pierced the swift [margin, *fleeing*] serpent" (R.V.).

Deeply interesting as these and other subjects connected with the Great Pyramid may be, I have sought to rest the argument rather upon matters of measurement and demonstration, and the following points, at least, seem to be firmly established.

### Conclusions.

1. That the Great Pyramid holds a *unique position* among the pyramids of Egypt, and that the failure in the later pyramids to reproduce the wisdom exhibited in the first and oldest of all, makes this wisdom even more conspicuous than if there were no other pyramids at all.

2. The absence of all marks of design and intelligence in the *later* pyramids (in which we should naturally expect progress instead of deterioration) shows that the knowledge exhibited in the first was not the possession or attainment of the wise and great of that age, but must have been communicated by superhuman intelligence.

3. That this revelation in stone—corresponding so closely with the inspired and prophetic revelation in the Bible on the one hand, and with Nature on the other—declares that in the Bible and in Nature we have the word and the work of the same Divine author.

4. That the manifest purpose in Nature, as well as in the Bible, is to reveal to us that Divine Author of them both, that the creature may know the great Creator who is before and above all science. "Known unto God are all His works from the beginning of the world."

5. That the central position given to the birth and death of our Lord Jesus Christ in the Great Pyramid, as in the Bible, shows us that in the mind of God that is the *central event* in regard to human history and the whole universe, "for by Him were all things created that are in heaven, and that are in earth, visible and invisible, whether they be thrones or dominions, or principalities, or powers: all things were created by Him, and for Him; and He is before all things, and by Him all things consist."

And surely the central object of our lives should be to know Him who is the great Revelation and Revealer, "the image of the invisible God." "In whom we have redemption through His blood, even the forgiveness of sins."

In a word, the Great Pyramid seems to be a prophetic monument and witness to the Lord Jesus Christ Himself, telling of the appearing of the grace of God bringing salvation, at His first advent; and of the future appearing in glory at His second advent for which we look. "Amen. Even so, come, Lord Jesus."

"Hark, what a sound, and too divine for hearing,
Stirs on the earth, and trembles in the air!
Is it the thunder of the Lord's appearing?
Is it the music of His people's prayer?

Surely He cometh, and a thousand voices
Shout to the saints and to the deaf are dumb;
Surely He cometh, and the earth rejoices,
Glad in His coming who hath sworn, I come."

# APPENDIX.

## CHRONOLOGICAL NOTE.

### THE DATE OF THE NATIVITY.

THE Nativity is usually calculated from the testimony of Josephus, who gives time-marks concerning the date of the death of Herod the Great, before which our Lord must have been born, as it was he who "sought the young child's life."

Josephus says that Herod reigned thirty-four years after the death of Antigonus, and thirty-seven years after he had been made king by the Romans. Herod obtained a prospective appointment as King of Judæa from the Roman Senate in B.C. 40, but he did not obtain actual possession until B.C. 37, when he, together with Sossius, captured Jerusalem and took Antigonus prisoner. Josephus states that Antigonus was not slain at that time, but was sent to Antony, who imprisoned him in Antioch, intending to reserve him to grace his triumph on his return to Rome. It is probable that not till Antony's return from his expedition against Armenia (B.C. 34) he at length complied with the solicitations of Herod, and gave orders for Antigonus to be beaten and beheaded at Antioch. If Herod the Great reigned thirty-four years after the death of Antigonus, he would not appear to have died before B.C. 1.

Josephus further indicates the time of Herod's death by stating that it was preceded by an eclipse of the moon. There were three lunar eclipses visible in Palestine about this time, each of which is thought by different authorities to be the one referred to by Josephus. (1) The first took place on the night of 12—13 March, B.C. 4 (Julian period 4710). This was of six digits only. (2) The second was a *total eclipse* on 10th January, B.C. 1 (Julian period 4713). (3) The third, on 29th December, B.C. 1, is variously reported as *total*, and as of seven digits. An eclipse in B.C. 1 would agree best with the thirty-four years interval after the death of Antigonus.

Another clue to the date of Christ's birth may be found in the mention of the fifteenth year of Tiberius Cæsar in connection with the beginning of John the Baptist's ministry, and the baptism of Jesus about this time, or shortly after, when He "began to be about thirty years of age" (Luke iii. 1—3, and 21—23).

The death of Augustus took place on the 19th of August, A.D. 14, but the *proclamation* of Tiberius as emperor was delayed for some weeks, or even months, until October or November of A.D. 14. Fifteen years later—that is, in A.D. 29—our Lord, we are told, began to be about thirty years old, which is understood to mean the completion of the twenty-ninth, and entering on the thirtieth year of His age. This evidence is most circumstantial, and points, like the eclipse, and the historical allusion to the interval after the death of Antigonus, to the year B.C. 1 as the year of the Nativity. (Mr. Galloway calculates that our Lord was born at Michaelmas, B.C. 1—that is, just three months before the commencement of the Christian era.) This would point to the autumn of A.D. 29 as the time of our Lord's baptism and the beginning of His public ministry, which continued for three and a-half years until the Passover of A.D. 33. In that year the 14th of Nisan fell on Friday, April 3rd, and it would appear on independent evidence to have been the time of our Saviour's crucifixion. Eusebius assigns the crucifixion to the nineteenth year of Tiberius, which corresponds with our A.D. 33.

Whatever theories may be advanced of an earlier date than B.C. 1 for the Nativity, it may be safely said that no evidence has ever been adduced which invalidates the testimony of St. Luke regarding the fifteenth year of Tiberius Cæsar.

Sir William Ramsey, speaking at the annual meeting of the Bible League on May 13th, 1915, showed how there had been nothing in the whole range of the New Testament where such astounding discoveries had proved the details as those of the first verses of Luke ii., which, he said, "have been more trampled upon and held up to ridicule than any other passage of the New Testament."

Some, following Sir Isaac Newton, think that A.D. 34, when 14th Nisan also fell on Friday, was the year of the crucifixion. This would make the Lord's life on earth extend to full thirty-three and a-half years.

In the "Approaching End of the Age" (pp. 525—530) Dr. Guinness (whilst reckoning earlier dates for the birth and crucifixion of Christ) showed that such a period was a soli-lunar cycle in which the sun gains on the moon one solar year, and he named this period "THE MESSIANIC CYCLE."

It is shown that the period from Christ's birth at the Feast of Tabernacles to the Passover, added to the thirty-three years, amounting in all to thirty-three years, seven months, and seven days, corresponds in the number of days with the 12,266·7 days of the soli-lunar cycle. Stated in decimals, this is given as 33·585 years.

Taking this figure as 33·6, Mr. James Simpson, of Edinburgh—one of the oldest Pyramid students—shows that this number fits the length of the Pyramid's passages as if it had been *a measuring rod used for the purpose.* Thus the factors

for the Grand Gallery length of 1881·6 Pyramid inches are 33·6 and 56 ($33{\cdot}6 \times 56 = 1881{\cdot}6$). In the same way all the passages are multiples of 33·6 from the outside entrance to the King's Chamber.

In addition to this, and much more, Mr. Simpson gives calculations which "imply that the Great Pyramid records a length for the tropical year of 365·242339597 + etc., mean solar days, which is neither its present length, when the record is being read, nor its length 4,080 years ago, when the record was built, but the length at A.D. 0, the epoch of Christ's Incarnation. This has been confirmed by good astronomers.

All this is not surprising if the Great Pyramid was designed to be a Messianic witness—a prophetic monument and enduring witness of Him who made all worlds, and who made man capable of understanding, in some degree, his great Creator's wisdom, power, and everlasting love.

## Was the Deluge Universal?

It is most important to understand the magnitude of the Flood. "As the days of Noah were, so shall also the coming of the Son of Man be." The Old Testament and the New stand together. Halley believed that the Flood was caused by a change of the axis of the outer crust of the earth, which he believed accounted also for the mystery of terrestrial magnetism.

The fact is well known that the earth's present axis of rotation is not the magnetic polar axis of the earth; there are two magnetic poles as there are North and South geographic poles.

The shifting of the outer globe would have broken up "the fountains of the great deep," and brought not only the ocean waters, but also the polar ice, over a great part of the earth's surface, thus accounting at the same time for the Flood and the "Great Ice Age."

The late Rev. W. B. Galloway wrote several books on this subject which can still be obtained.*

Such a vast change little more than four thousand years ago would not harmonise with the known facts of history—say of Egypt, China, India, etc. But given another thousand years—as the LXX. Chronology and the Great Pyramid give for the date of the Deluge—then it can be affirmed without fear of contradiction that there is no *established* fact of history or science to disprove it.

Such a change of the earth's axis would account for the obliquity of the earth's course in relation to the ecliptic, and for the Precession of the equinoxes, the period of which is more than once recorded in the Pyramid; and it would also account for the change of seasons, and for the gradual shortening of human life after the Flood.

* See list of books on page 80.

## Israel in Egypt.

How long were the children of Israel in Egypt?

There is no single text which answers this question. Exodus xii. 40 states that "the sojourning of the children of Israel, who dwelt in Egypt, was 430 years." The verse following shows that this period had a definite beginning and end. "And it came to pass at the end of the 430 years, even the self-same day it came to pass, that all the hosts of the Lord went out from the land of Egypt." The double repetition of the fact, and of the number of years, is most emphatic. The writer is sure of the facts. The same period is referred to by the Apostle Paul in Gal. iii. 17, where 430 years are said to have elapsed between the confirmation of God's covenant and the giving of the law on Mount Sinai.

All the confusion that has arisen about the period of Israel in Egypt has been caused by the neglect of one word in this text, viz., "confirmed." It is from the *confirmation* of the covenant that the reckoning of the 430 years is made.

A thousand years before St. Paul wrote to the Galatians about the *confirmation* of the covenant 430 years before the giving of the Law on Mount Sinai, King David had written a Psalm to commemorate the removal of the Ark from the House of Obed-edom to the city of David, where he had pitched a tent for it. In that Psalm, and in 1 Chron. xvi. 7—22, where it is also given in its historical setting, we have a double repetition of the word "confirmed":—

> "He hath remembered His covenant for ever,
> The word which He commanded to a thousand generations:
> Which covenant He made with Abraham,
> And His oath unto Isaac;
> And confirmed the same unto Jacob for a law,
> And to Israel for an everlasting covenant" (Psa. cv. 8—10).

To Jacob, the supplanter, who had obtained his father's blessing by fraud, God *confirmed* the covenant He had made with Abraham and renewed to Isaac. In token of that confirmation, Jacob's name was changed to Israel, meaning a "Prince with God."

Before that change of name, after the night of wrestling with the angel at the ford Jabbok, there was no *Israel*, and therefore there could have been no "children of Israel," and no "sojourning of the children of Israel" in Egypt or elsewhere.

Exodus xii. 40 is very precise, and reads, "Now the sojourning of the children of Israel, who dwelt in Egypt, was 430 years." The words imply that they had been the children of Israel all that time, and dwelling in Egypt most of the time.

In that most valuable book "The Chain of Ages," Mr. Galloway points out that Jacob left Padan Aram to return to the land

of Canaan when he was just a hundred years old (B.C. 1970). Thirty years later at the age of 130 (Gen. xlvii. 9) he came into Egypt (B.C. 1940), and from that date to the exodus (B.C. 1540) was 400 years, making up the exact and full number of 430 years from the *confirmation* of the covenant to the giving of the Law upon Mount Sinai.

Neglect of this simple Scriptural interpretation of Gal. iii. 17 has led not only to a reduction of the time spent in Egypt to little more than half the actual time ; but also to the application of the title "children of Israel" to the progenitors of Israel himself!

HARMONY OF PERIODS PRECEDING TEMPLE BUILDING.

| | Years. | Years. | Years. | Years. |
|---|---|---|---|---|
| From Jacob's leaving Padan Aram to his descent into Egypt ... | — | 30 | — | — |
| Actual sojourn in Egypt of Abraham's seed (Gen. xv. 13; Acts vii. 6) ... ... ... | 400 | 400 | 400 | |
| Wilderness Wanderings | — | — | 40 | 40 |
| Distribution of Canaan among the Tribes under Joshua ... | — | — | 10 | — |
| From entering Canaan to time of Jephthah (Judges xi. 26) ... | — | — | — | 300 |
| Jephthah to Saul (approximately) ... ... | — | — | — | 60 |
| Saul's reign ... ... | — | — | — | 40 |
| David's reign ... ... | — | — | — | 40 |
| | 400 | 430 | 450 | 480 |
| Proof texts ... ... | Gen. xv. 13 Acts vii. 6 | Ex. xii. 40, 41 Gal. iii. 17 | Acts xiii 17 —20 R.V.* | 1 Kings vi. 1 |

* The difference in the A.V. and R.V. reading of Acts xiii. 17—20 must be specially noticed. The A.V. makes 450 years appear to be the period of the rule of the Judges ; whereas the R.V. more correctly applies the 450 years to the time before the Judges, including the sojourn in Egypt ; the wilderness wanderings ; and the inheriting of the land of Canaan, as shown in the table of figures.

## B.C. Dates of Old Testament Landmarks.

It may be interesting to give a summary of the chief events referred to in this book with the B.C. dates corresponding therewith. It will be seen that nearly 5,250 years have elapsed since the Deluge, and more than seven and a-half thousand years since the creation of Adam. The dates given in brackets are the only ones not ascertained from the Bible.

| EVENT. | B.C. DATE. |
|---|---|
| Birth of Jesus Christ... ... ... ... ... ... | 1 |
| Cyrus decree for the restoration of the Jews ... ... | 536 |
| Jerusalem and the Temple destroyed by fire ... ... | 588 |
| Captivity of Judah (to Babylon for 70 years) ... ... | 606 |
| Captivity of Israel to Assyria (Ten Tribes lost) ... ... | 721 |
| Temple building begun by Solomon ... ... ... | 1060 |
| Exodus (480 years before Temple built) ... ... ... | 1540 |
| Jacob's descent into Egypt (400 years before Exodus) ... | 1940 |
| Jacob's leaving Padan Aram (30 years earlier) ... ... | 1970 |
| Abraham's leaving Haran ... ... ... ... ... | 2155 |
| Abraham's call in Ur of the Chaldees ... ... ... | [2170] |
| *Building of the Great Pyramid* ... ... ... ... | [2170] |
| Peleg's birth (division of land) ... ... ... ... | 2931 |
| Dispersion (calculated from Pyramid Passage) ... ... | [2941-2] |
| Death of Noah (350 years after the Flood) ... ... | 2982 |
| Deluge (5,246 years before A.D. 1915) ... ... ... | 3331-2 |
| Creation of Adam (7,502 years before A.D. 1915)... ... | 5587-8 |

The Jews were restored from Babylon after seventy years' captivity, as foretold by the Prophet Jeremiah.

A longer period of 2,520 years (a week of seven *times*, *i.e.*, $360 \times 7$) from 606 B.C., runs out in 1915. Many are now looking for a return of the Jews to Palestine, with some sort of self-government (perhaps as a restored province of Egypt under British protection) after the downfall of Turkey. From the burning of the Temple and the destruction of Jerusalem in 588 B.C. the same period of seven "times" would only end about A.D. 1933.

When we see Jerusalem no longer "trodden down of the Gentiles," we shall know that the "Times of the Gentiles" are fulfilled (Luke xxi. 24).

The shaking of all things in the present war should lead us to seek an understanding of the "signs of the times," and a personal interest in that kingdom which cannot be shaken or destroyed.

## What the Jews Say of the War.

An article by Israel Zangwill on "The War and the Jews" which appeared in the *Daily Chronicle* of July 22nd and 23rd, after the last pages of this book were in type, gives the opportunity for an added note on this most momentous "sign of the times."

The writer shows that the Jews have had no national history since the first century of the Christian era, but that now in this 20th century, and in connection with this war, in which 600,000 Jews are taking part (in the army of Russia 350,000, of Austro-Hungary 170,000, of Germany 50,000, etc.), the thought of *Jewish nationalism* is still strong. "If I forget thee, O Jerusalem, let my right hand forget her cunning," may still be said by many of Judah's children.

The interest of the tragic relation of the war to the Jews is that the age-long subject of prophecy has become a political question, and one which promises to become acute when the war is over.

"Neither of the two great Jewish issues—the abolition of the Pale in Russia, and the return to Palestine—can fail to be profoundly affected by the war," says Mr. Zangwill. It is shown that in Poland, which is "pre-eminently the home of Jewry," the anguish of the oppressed Jews is keener than that of the Belgians. "In the long history of the martyr-people there is no ghastlier chapter. Yet it is lost—and necessarily lost—in the fathomless ocean of Christian suffering, in the great world-tragedy. . . . It is related that when one of the ejected footsore populations, wandering at midnight on the wintry roads, with their weeping young children, met marching regiments of their own army, the women stretched out their hands in frantic beseechment to the Jews in the ranks. But the Jewish soldiers could only weep like the children—and march on."

And these Jewish soldiers are the bravest of the brave. "You are the only people who think it a disgrace to be servants of those to whom all the world hath submitted," said Agrippa, when trying to hold back the Jews from rising against the Roman Empire.

Fifteen thousand Jews are said to be fighting for the British Empire. These are all soldiers by choice as well as by profession. In a footnote on page 54 reference is made to the Zionist soldiers in Egypt who were preparing to fight for Palestine. We now hear of these same Zionist soldiers as the "Zion Mule Transport Corps," who, after only six weeks' training, were transferred, with their thousand mules, to the Dardanelles, where their perilous function is to bring ammunition and stores up to the trenches.

"Already they have been publicly thanked by the General, while one for gallantry in operations near Krithia has received

the D.S.M. But as one of the wounded said, 'Proud as I am of my wound, I should be the happiest man alive had I received it on the soil of Palestine.'"

Mr. Zangwill's article shows how this came to pass through the expulsion from Palestine of all the Jews who would not take on Ottoman nationality. The U.S. cruiser *Tennessee* transported thousands of refugees gratuitously from Jaffa to Alexandria. "For the suzerain of Palestine they might have been ready to fight, had not the Turks declared a 'Holy' war, which these young Jews felt was as little their business as to fight for the Russia they had long since quitted. But Egypt had been proclaimed English, and inasmuch as Russian law allowed absent subjects to fight in an allied army, they would fight with England—for Palestine!"

The idea of fighting for Palestine was not new to those young Zionists, and they begged to be enlisted in a British-Palestine battalion. There is something pathetic in this Jewish appeal to Great Britain in the land of Egypt. We remember Judah's touching appeal to Joseph, and how Joseph's exaltation in Egypt worked the deliverance of Israel in the time of famine.

Are Joseph and Judah once more meeting in the land of Egypt in this time of sore trouble? Whether it be so or not, the Jews are relying on the assurance given by our Foreign Secretary, Sir Edward Grey, that at the end of the war no transferred population shall be deprived of its status. "Hence should Russia retain any portion of Galicia she will have to leave the Jews their pre-existing equal rights, and these rights will then become the leverage for raising the Jewish status throughout the rest of Russia. For it is impossible that Russia will be able to allow her new subjects an equality which she refuses to the old."

It is thus recognised that Palestine alone cannot solve the Jewish problem and that *equal rights everywhere* remains an imperative necessity. But through all time Jews will remain Jews, and the ultimate goal, which may be very near, is JEWISH NATIONALISM.

### GLASTONBURY ABBEY, THE TABERNACLE, AND THE PYRAMID.

A suggestion may be hazarded as to the way in which the Great Pyramid measures reached Great Britain.

The first Christian church erected in Great Britain (in the first century) was at Glastonbury. It was said to have been built according to the size and pattern of the Tabernacle.

This church built of wood and twisted wattles was 60 feet long and 20 wide—this would correspond with the 30 and 10 cubits of the Tabernacle if the cubit was about 2 feet, or 25 inches.

The first masonry church is said to have been built around

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the wattle walls so as to preserve the original plan and size—which is continued in the more modern building of to-day.

May it not be that the original sacred cubit of 25 inches, used in the construction of the Great Pyramid, and preserved in the Tabernacle measures, was passed on in the manner suggested to the people specially interested in the proto-type, and to whose keeping the Great Pyramid is now committed?

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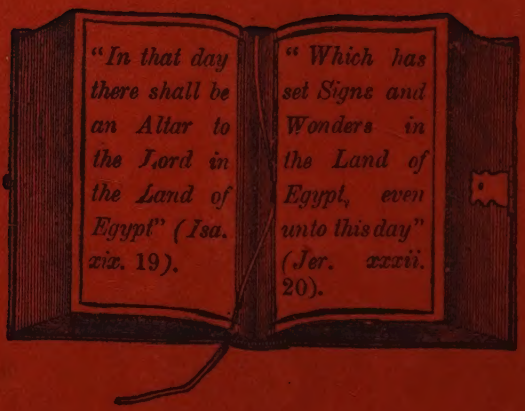
"In that day there shall be an Altar to the Lord in the Land of Egypt" (Isa. xix. 19).
"Which has set Signs and Wonders in the Land of Egypt, even unto this day" (Jer. xxxii. 20).